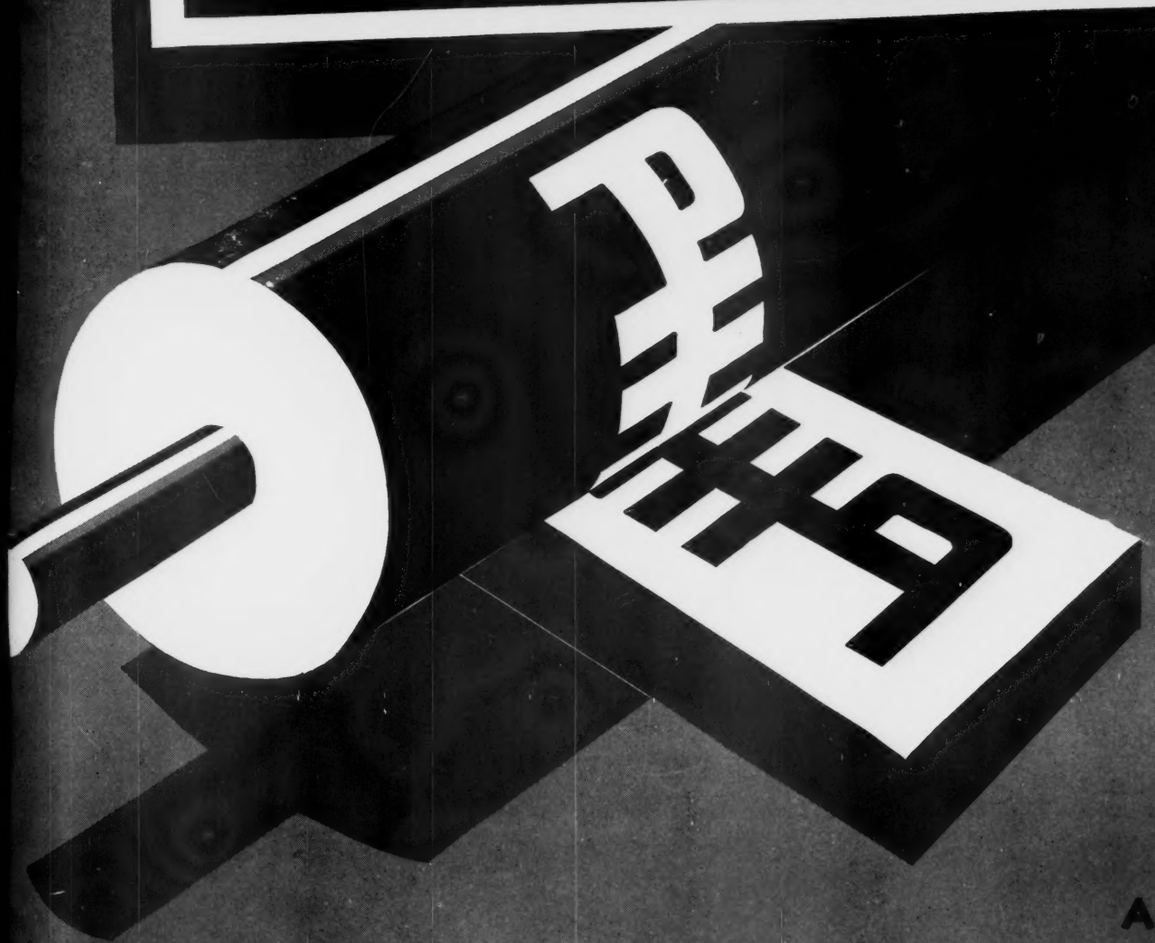
Printing Equipment



APRIL, 1942

PREVENTATIVE MAINTENANCE

★

A primary defense activity of printing plants is to maintain maximum production capacity to meet the unforeseen demands of war.

A contribution of the printing industry to the war effort is preventative maintenance of equipment that will assure press production and reduce calls for repair parts upon the nation's manufacturing facilities.

Frequent and thorough lubrication—attention to electrical equipment, it is invaluable and likely to become increasingly unavailable—care of rollers to assure cleanliness and guard against excessive pressures—these are all typical of preventative maintenance that will help prolong press service and can help the war effort.

The Harris service organization is available to consult with and advise plant owners on means and methods to secure maximum press performance.

★

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IOWA NEWSPAPER *Mechanical Conference to Include Line-Casting Machinists' Group — Interesting Program Formulated — Leon Link Principal Speaker*

A JOINT meeting of the Iowa Newspaper Mechanical Conference and the Iowa Line-casting Machinists' Association will be held at Hotel Fort Des Moines, Des Moines, Iowa on May 24, 25 and 26. This will be the second meeting of the Iowa Machinists' group, and the sixteenth for the Iowa Newspaper Mechanical Conference. Problems of maintaining economical and high production standards in newspaper mechanical departments during the war time emergency will dominate the program discussions. Leon A. Link, Principal Production Specialist, Newspaper Section, Printing and Publishing Branch of WPB, will be the principal Conference speaker. He will discuss ways and means for conserving materials and utilizing excess floor space in newspaper plants to help win the war.

Guy J. Chappell, President Iowa Daily Newspaper Mechanical Conference

Officers of the Iowa Mechanical conference are: Guy J. Chappell, Iowa City *Press-Citizen*, president; Charles H. Bleuer, Davenport *Democrat*, vice president; Val Wells, Des Moines *Register* and *Tribune*, second vice president in charge of arrangements in the host city; and Paul Kamler, Clinton *Herald*, secretary-treasurer.

Officers of the Iowa Line-casting Machinists' Association are: C. B. Bloomburg, Des Moines *Register* and *Tribune*, president; Clark Olney, Sioux City *Journal* and *Tribune*, vice president; Bud Hourihan, Ottumwa *Courier*, secretary-treasurer; and the following executive committee: Marion Dingman, Cedar Rapids *Gazette;* Cy Morse, Dubuque *Telegraph-Herald* and Lou Humphrey of Des Moines.

Machinists' Meeting and Clinics

The conference opens Sunday morning, May 24, with registration at convention headquarters in Hotel Fort Des Moines. At 9:30 o'clock, the meeting of the Iowa Linecasting Machinists' Association will be called to order by President Carl Bloomburg. The program for the session includes reports by officers, the showing of a sound slide film on type characters by the Mergenthaler Linotype Co. and a motion picture of matrix manufacture by Intertype Corporation.

A machinists' clinic will be held at 2 p.m. Sunday in the composing room of the Des Moines *Register* and *Tribune*, under the supervision of Bud Hourihan, machinist at the Ottumwa *Courier*. The Monotype section of the clinic will be in charge of Al Randall, machinist-operator at the *Register* and *Tribune*, and the job section will be supervised by R. E. Sanford, also of the *Register* and *Tribune*.

Ken Waughtal of Kayenay Engraving & Copperplate Co., Mason City, Ia., is Chairman of Iowa Conference Engraving Clinic

Conference Program

The Iowa convention proper will be called to order at 9:30 a.m. Monday, with an address of welcome by the publisher of the *Register* and *Tribune*. Fred Hudson, Director of the Engineering Department, International Printing Pressman and Assistants Union, will be a featured speaker. W. W. Warfel of the Chemco Photo Products Co. will speak, and Vernon Eck of the William Hodd Dunwoody Industrial Institute will demonstrate and explain the history of early composing machines.

Following a luncheon, the afternoon session will be divided into three group meetings.

Tod Bleuer will be chairman of the composing room session; Val Wells will lead the joint meeting of the stereotype and press group, and Ken Waughtal, of the Kayenay Engraving and Copperplate Engraving Co., Mason City, will be in charge of the engraving group.

Subjects for Group Meetings

Subjects to be discussed at the group meetings will include the following: Costs—What We are Doing to Keep Production Up to High Standard through Present War Time Emergency? Developments of Methods to Eliminate Lost Motion in Composing Room Operations. Maintaining Good Will Attitude of Employes in Mechanical Departments. What We Are Doing to Maintain and Conserve Composing Room, Stereotype, Pressroom, and Engraving Department Equipment and Supplies? Methods to be Used Working With Substitute Materials.

Banquet

The annual convention banquet will be held Monday evening at the Hotel Fort Des Moines.

Correlation Meeting

A joint session of all departments will be held at 9:30 a.m. Tuesday at which time the problems of the group meetings of Monday afternoon will be discussed.

The election of officers, selection of the 1943 convention city, and general business matters also will be considered at the Tuesday morning session.

The closing event of the convention Tuesday afternoon will be a trip through the Meredith Publishing Co. plant. The Des Moines *Register* and *Tribune* plant will be open to members of the conference during the convention.

BOOKS
RECEIVED

Newspaper Presswork

A PRETENTIOUS first edition of a technical course in newspaper presswork has been published by the Technical Trade School of the International Printing Pressmen and Assistants' Union, Pressmen's Home, Tenn. It is our understanding the course is available to members of the union. The 12 separate well illustrated lesson booklets were prepared under the supervision of Director Fred Hudson of the Newspaper Engineering Department of the School. The text and illustrations are printed by offset on hard stock to withstand severe handling.

Printing Equipment Engineer is glad that this course has been published in substantial form for home study as well as school use. There has been a need for such a course and it is rather surprising that this important technical division of the newspaper printing industry has not been supplied before this time. However, the course should be received with great avidity, not alone because of its isolation in the technical text book field, but because it has been prepared under the supervision of a teacher who is recognized as knowing the field intimately. In the preparation of the course, the compiler "kept his feet on the ground" and talks the language of the pressman.

Each of the twelve sections is devoted to some particular part of the press, including two sections on the gravure process as applied to newspaper printing. Section 1 contains information on the former, folder, ink fountains and ink dis-

(*Continued on Page 44*)

The LUDLOW Tempo family—

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In Java
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STRIKES
Ore vein
Ludlow Tempo Heavy

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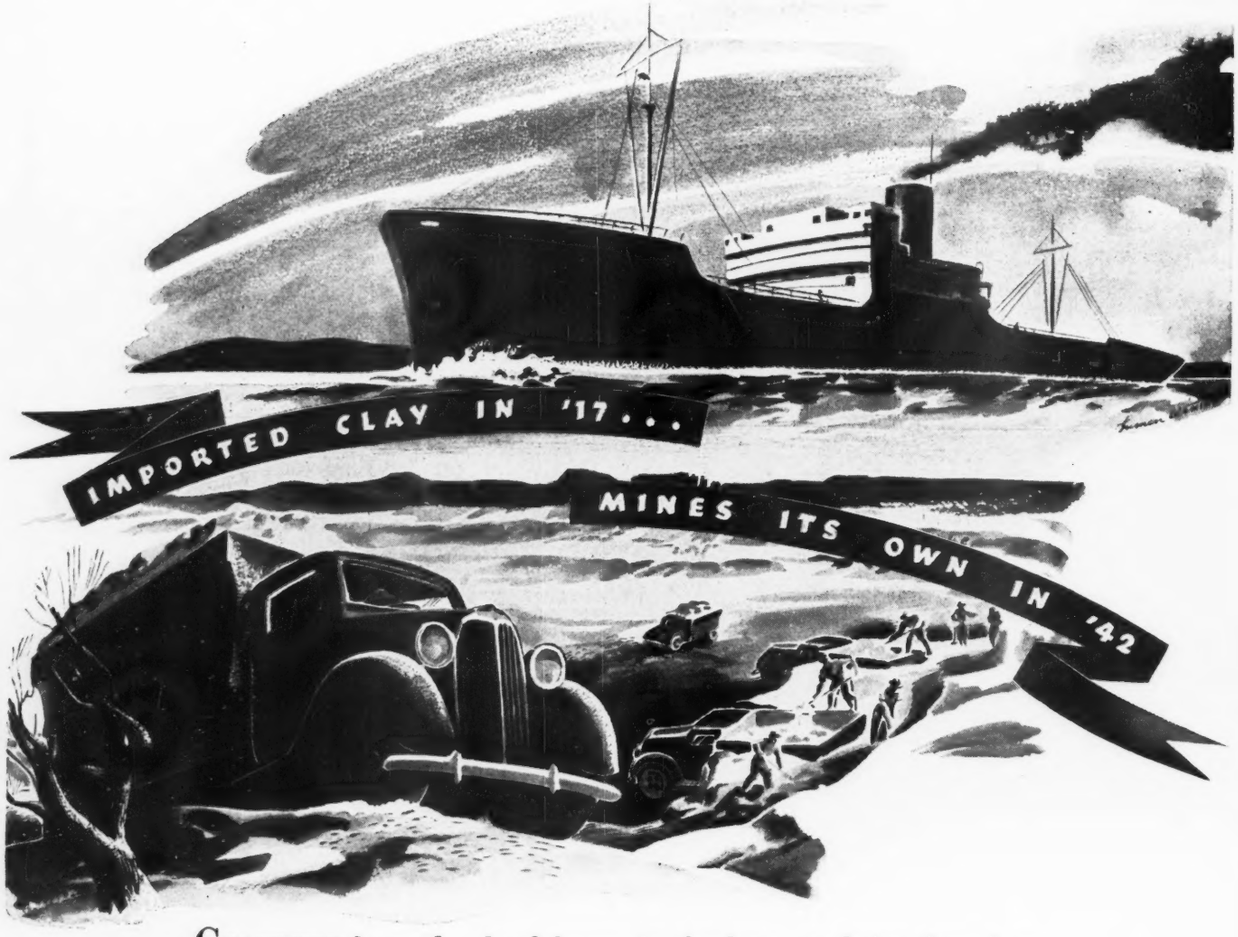
CHAMPION *fools the* SUBMARINES



CHAMPION learned a hard lesson in the last war, being forced to charter its own ship, dodge the submarines, and pay big money to import clay needed to continue coating paper. Today Champion operates its own clay mines, controls great stands of domestic timber, and makes many of its chemicals. Champion has combined such foresight with unusual resources and long experience to become largely self contained. This mill thus assures Government and essential industry the greatest flow of paper possible under this wartime emergency.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

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TECHNICAL BOOKS

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- **PRINTING INKS** — Their Chemistry and Technology —**By Carleton Ellis.** Bound in cloth, 6 in. by 9½ in., 560 pages, well illustrated. For printing executives, pressmen, photo-engravers, platemakers, ink manufacturers, chemists, paper-makers. Author stays close to printing plant. The solving of new production problems brought about by technological improvements, both in equipment and inks, created the urgent need for this book. Price $7, cash with order.
- **THE PRACTICE OF PRESSWORK — By Craig R. Spicher.** We offer copies to our readers, at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- **LITHOGRAPHER'S MANUAL—Compiled by Walter E. Soderstrom.** Second revised edition. Technical information from copy to finished job. Nationally known technical men contributed the bulk of practical camera, platemaking and presswork information. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped. Many of the 368 pages are illustrated. Price $5 per copy, cash with order.
- **PHOTOGRAVURE — By H. Mills Cartwright.** Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- **MANUAL OF STEREOTYPING — By Joseph Goggin.** This 256-page book conveys technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.
- **PRESSROOM PROBLEMS AND ANSWERS — By Fred W. Hoch.** Might be considered a miniature encyclopedia since it contains answers to 334 pressroom problems which have been answered by Mr. Hoch. Written in language of journeyman pressman. Pressmen, production men, paper and ink manufacturers, electrotypers and photo-engravers will find this book of high utility when pressroom problems arise in which tendency is to lay blame on furnished materials used in pressroom production. Size, 6 in. by 9½ in., 258 pages, gold stamped blue cloth. Price, $3 per copy, cash with order.
- **HOW TO ADJUST WORK-UPS — By Wm H. Lichter and Geo. F. Smalley.** Booklet consists of 24 pages in which are analyzed and remedies are given for prevention and/or elimination of work-ups. Material written as result of actual plant experience. Size, 5¼ in. by 7¼ in. Price, $1 per copy, cash with order.
- **HANDBOOK FOR PRESSMEN — By Fred W. Hoch.** Book written by authority on all phases of flat-bed letterpress production for the practical pressman Contains 248 pages, 26 illustrations and 24 charts, $3 per copy, cash with order.

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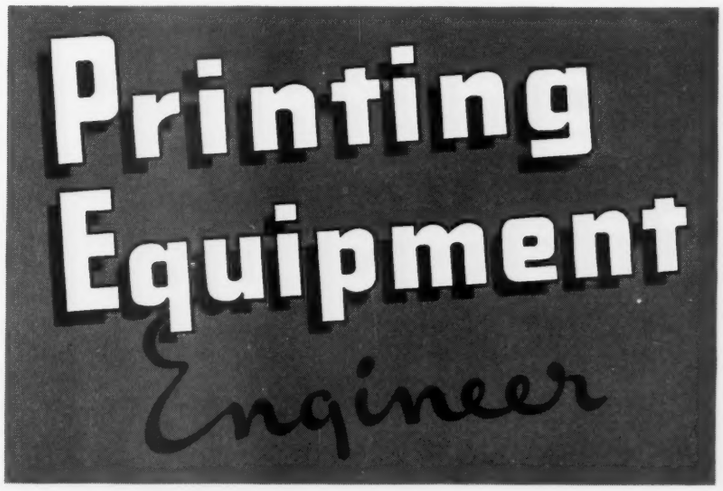

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MEMBER CONTROLLED CCA CIRCULATION AUDIT

For the Duration of the Emergency

There are times in the history of a nation when every man must subordinate his private hopes and ambitions to the security of the country of which he is a part. No one can doubt the need today for American arms supremacy . . . the urgency of the task before us . . . or the necessity for the fullest cooperation of individual and industry alike in the emergency that confronts us.

We of the Miehle Printing Press and Manufacturing Company have taken our responsibility most seriously. We are manufacturing large quantities of ordnance for the United States Navy and many machine tools so sorely needed by hundreds of other manufacturers anxious and waiting to increase their production of defense materials.

Through early participation in this effort and by virtue of long experience in working to high standards of mechanical excellence, our production is well under way . . . even ahead of schedule in a number of items. And we are naturally proud that Miehle was one of the first fourteen American industrial concerns whose management and men were honored with the U. S. Navy's famous "E" award for "outstanding performance in the production of naval ordnance material for the national defense program."

The extent of our participation in the National Defense

Program has necessitated a considerable reorganization of our staff and equipment. We are not unmindful of our obligation to the many users of Miehle Printing Presses and to the graphic arts in general. Our customer relationships, painstakingly built over many years, are invaluable to our company's present and future . . . probably more valuable than all our physical assets combined. And so, in our plans we have provided for:

1. Repair part and machinist service as usual.

2. The construction of new machines to the maximum extent we are able to procure necessary materials.

3. Continuation of engineering effort to the end that postwar requirements may be met by improved Miehle products.

The extent to which we shall be successful in meeting the needs of the graphic arts industry in these trying times is certain to hinge on many factors beyond our control. We are sure that printers will recognize and appreciate this fact and we are both proud and grateful for the splendid spirit of sympathetic understanding which has already been manifested in this regard.

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Nearly all Wood production facilities are now devoted to making war materials. Some items of Wood machinery for improving newspaper presswork are still available, however, including factory rebuilt Junior and Pony Autoplates and Autoshavers, and vacuum equipment for any Autoplate, new or old. For details, please write us. Call upon us also for any help that we can give you on your current production problems.

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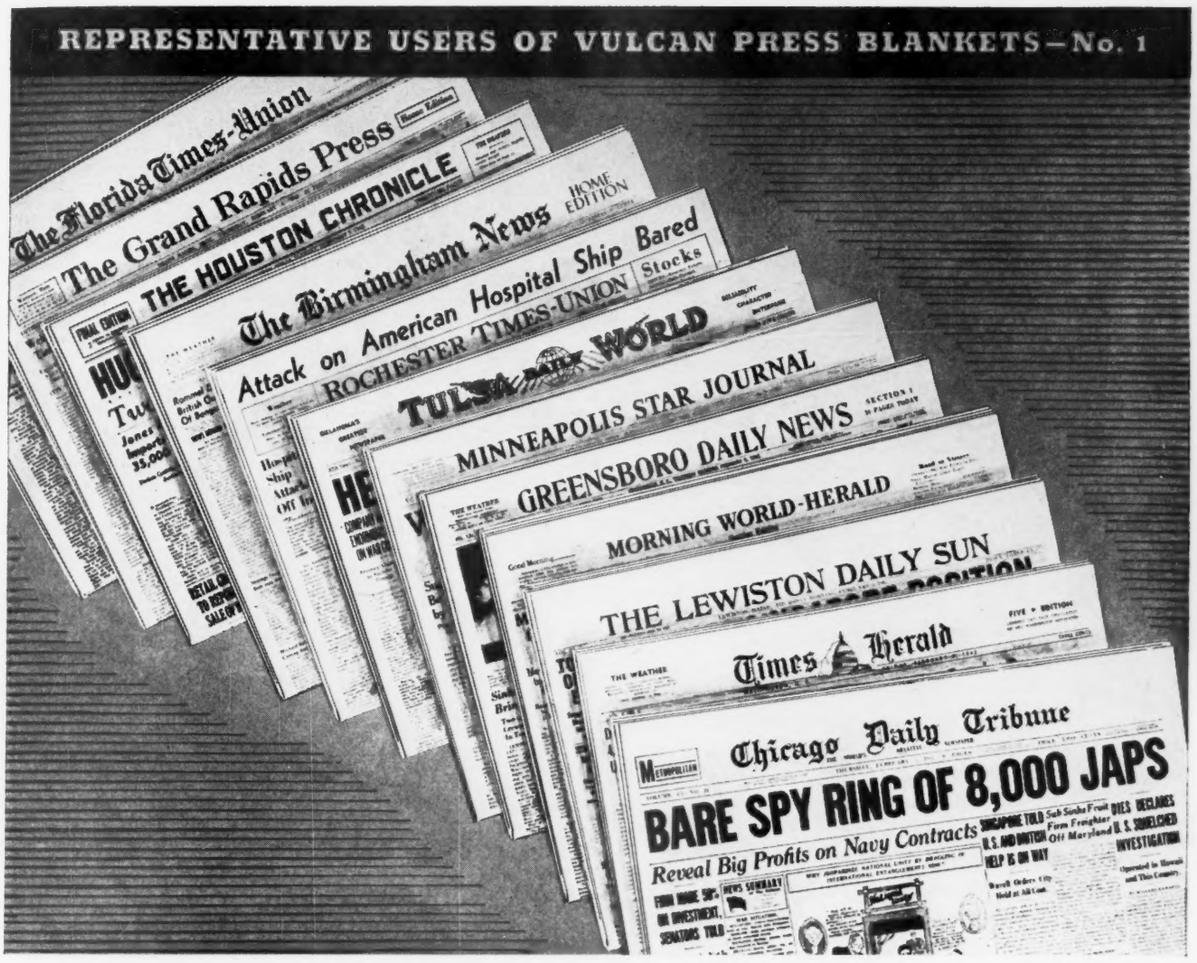

No Restrictions on Research

For the present, some shipments of Vulcan press blankets and inking rollers may be delayed, owing to ever increasing Defense work in the Vulcan Factory. You may be sure, however, that everything possible is being done to expedite deliveries of these Vulcan products. Laboratory research, too, is being carried on as usual, with a view to the possibility of even better Vulcan blankets and rollers in the future. Write for details and recommendations; and please place essential orders for blankets and rollers as far in advance as possible.

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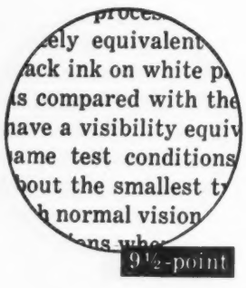
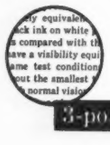
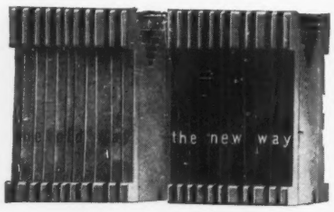


OR THIS?



Scientific tests of the reference marks on Linotype and Intertype matrices, made by means of the Luckiesh-Moss Visibility Meter, prove that BLACK & WHITE processed reference marks have a visibility factor equivalent to that of 9½-point type, as compared with 3-point for used non-processed reference marks.



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Black & White Contrast Reduces Errors. With contrast reference marks, as illustrated below, a 33% error reduction in news composition is effected and errors in ad composition are reduced 40%, by actual tests. Fewer errors mean fewer revises, fewer proofs, less non-productive time and more speed in completing page forms.

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MATRIX CONTRAST SERVICE

EXPLANATIONS *of WPB Preference Rating, Limitation and Mandatory Orders of Direct Concern to Printing and Publishing Industry Made by Acting Chief George A. Renard*

PRINTING plant executives will appreciate the explanations of preference rating, limitation and mandatory orders issued by WPB and which directly concern the printing and publishing industry. These explanations were issued on Wednesday, March 18, by Acting Chief George A. Renard of the Printing and Publishing Branch of the War Production Board.

This report extends, amplifies, or revises explanations issued by the Printing and Publishing Branch in Releases Nos. 100, 101 and 102 made available for general distribution on January 2, 1942.

"We have attempted here to present the situation," states Mr. Renard, "with respect to availability of many items involved in our manufacturing operations and, if the entire industry's operating and processing supply picture is viewed in broad perspective, a not too dismal picture is indicated.

"None-the-less, in the interest of the war effort, it is strongly recommended that each individual printer and publisher adopt every possible conservation measure to the end that materials needed by the industry be stretched as far as practicable, and that the industry be maintained to the fullest extent possible under war conditions.

"Before surveying the L and M Orders it seems advisable to state the views of the Printing and Publishing Branch on P.R. No. 1 Amended, and the P Orders that now apply to our industry operations."

Mr. Renard's statement is as follows:

Priorities Regulation No. 1 as amended December 23, 1941

This regulation applies to inventories of operating and processing supplies, and is applicable to both purchaser and seller or supplier. All users of materials in the printing and publishing industry who have current inventories of any material in excess of a "practicable minimum working inventory" must refrain from accepting further delivery until stocks have been restored on a basis that will permit acceptance of delivery without violating provisions of the Order. Also, this regulation prohibits the seller or supplier from knowingly making delivery of material which will increase the inventory of the receiver above a "practicable minimum working inventory" as defined in the Order.

In view of this, it is suggested that any supplier who may have reason to believe that materials so delivered are in excess of the requirements of the user, secure a sworn statement from the user as to the inventory position of material under consideration before making delivery. In this way the seller or supplier can observe strictly the regulation and avoid penalties of non-compliance.

The following statements although not official interpretations are offered as suggestions to guide the industry in conforming with provisions of Part 944.14 of P.R. No. 1 with respect to "practicable minimum working inventories" of operating and processing supplies. If and when official interpretations are published it is thought they will not be more liberal than the following:

Processing Supplies—An inventory of any grade of *any material included in the finished product* (*e.g.*, paper, ink, stitching wire, adhesives, etc.) in excess of 90 days supply of each item, on the basis of current method and rate of operation is considered the maximum quantity required.

Operating Supplies—An inventory of any grade of any *material employed in producing the finished product* (*e.g.*, photographic materials, gum arabic, electrotyper's backing metal and foil, etc., and all operating supplies other than those specified below), in excess of 60 days' supply of each item, on basis of current method and rate of operation is considered the maximum quantity required.

The following items are some of the exceptions to the above "operating supply" explanation:

Copper (in all forms)—30 days
Lead—45 to 60 days
Glycerine—30 days
Nickel—30 days
Chromium—30 days
Rubber—30 days

Supplementary reports will be published weekly concerning other items that may require special inventory regulations.

PD-25A or PD-25X

The Production Requirement Plan fits admirably many industries but inasmuch as no preference ratings for paper are available under this plan (or any other basis) and as printers and publishers have P-100 available to them with its A-10 preference rating for all maintenance repair and operating supplies, it is the considered counsel of this Branch for the present that Printers and Publishers elect to continue under the existing provisions and determine not to accept the proposed assistance available under the Production Requirements Plan.

P-100 — Operating Supplies; Maintenance and Repair Materials

An automatic A-10 rating for supplies and materials is granted to manufacturers, fabricators or processors for items not included in the finished product. Provided that provisions of P.R. No. 1 Amended are not violated the Order permits the use of materials up to 110% of 1940 rate of usage and deliveries, and 110% of December 31, 1940 inventories, all based on "aggregate dollar volume". This Order applies most advantageously to self-contained plants in procurement of operating supplies. However, it is somewhat discriminatory as some purchasers of printing such as banks, insurance and real estate companies, (considered "non-producers" because they do not fabricate or process materials), are not privileged to apply the rating and therefore *photo-engravers, electrotypers, offset plate makers, and other trade services* when filing such orders, cannot apply the rating for procurement of items included in their end-products. Two forms of relief are provided the *electrotyper, photo-engraver, etc.* for obtaining materials in such cases.

(1) submit Form PD-1A for necessary materials only or
(2) submit Form PD-25A to obtain blanket rating for all operating and processing supplies. (If Production Requirements Plan is accepted, it must be understood that *no* preference rating other than those assigned under this plan will be used by the applicant to obtain deliveries of production materials, maintenance, repair and operating supplies, unless specifically authorized by the Director of Priorities, received through the P.R.P.)

This Branch is now drafting a "Maintenance, Repair and Operating Supplies Order for Printing and Publishing Industry" in which it is hoped this discrimination can be eliminated. P-100 will remain in force until proposed order is approved and released.

Special Note—Clarification of the use of P-100 by Non-Producers issued February 16th, by the Maintenance and Repairs Section of the War Production Board—"In the event an insurance company or other non-producer has a printing establishment that uses power-driven presses and type to complete the printing job, P-100 may be used" for operating supplies and maintenance materials *only* for the operation of the printing division or section of the concern.

P-101 — Preference Rating For Materials Employed in Manufacturing Stitching and Bookbinder's Wire

An A-8 rating was made available January 27 permitting wire producers to apply the rating to obtain delivery of steel rods necessary to make round or flat stitching wire used only in the binding processes employed in printing, publishing and related services. Rating can be applied only for materials authorized on Form PD-82. War Production Board will determine these requirements on a quarterly basis and a reduction of from 10 to 12 percent from normal 1941 usage of steel is expected for the first quarter. Restrictions on use of steel in succeeding quarters may be greater because of increased military demands. WPB urges graphic arts establishments to study consumption and effect every measure to conserve usage of binding wires.

Printers, publishers and related service industries need no preference rating as the wire will be available to them on the same basis as 1940 purchases. This order excludes preformed staples, box-stay wire, mechanical wire (spiral binding). It does cover partial supplies of match book staples without the tin coating.

Limitation (L) Orders

L-11—Limitation on Chlorine

Present curtailment of chlorine usages by 30% for bleaching has lowered brightness (whiteness) of papers and permitted small dirt specks to appear that formerly were bleached out. Further reductions in chlorine usage expected soon and brightness ceilings will be lowered and established for different types of papers.

L-20—Cellophane Order

Amendment No. 2 to Limitation Order L-20 issued February 16th (WPB release 237 extends order until March 17, 1942.) Studies of cellophane uses are now being made and either a further extension of L-20 or an Order to replace it will be issued at the end of this thirty day period. Cellophane and similar transparent materials derived from cellulose are defined as having a thickness of less than .005 of an inch. This Order continues to prohibit the use of cellophane on paper and paper products, including books, labels, tags, index cards, advertising and display material, greeting cards, playing cards, match book covers, school supplies, jigsaw puzzles, and stationery, but does not include so-called window correspondence envelopes. Such items as chlorine, phenol, and glycerine are involved in the manufacture of this item, all of which are on the critical list.

EDITOR'S NOTE

Mechanical and production executive readers of Printing Equipment Engineer *who may have had some difficulty in grasping the meaning and effects of the War Production Board's program as it affects the printing industry in relation to the war itself can obtain a clear picture of the Board's immense undertaking by reading* Explanations of WPB Preference Rating, Limitation and Mandatory Orders, *recently made public by Acting Chief George A. Renard of the Printing and Publishing Branch published on this page.*

In addition, a discussion on executive cooperation in the newspaper field is given by Principal Production Specialist Leon A. Link, Newspaper Section, Printing and Publishing Branch, elsewhere in this issue, under the title What Executives Can Do To Help Win the War.

Most Critical Mandatory (M) Orders

Aluminum—Refer to Order M-1-e

Order released January 23, prohibits the use of aluminum in any manufacture except on war contracts and fifteen items specifically set out in Order. The position of this industry has been reviewed with the Aluminum Branch to obtain clearance for usage of stocks on hand that are frozen by this Order. The Aluminum Branch has issued the following ruling:

(a) (1) Aluminum Leaf
(2) Aluminum Foil already mounted to paper, board, etc:—Users must appeal promptly for permission to continue use stating inventory, where and when it was purchased and end-product usage. Direct appeals in accordance with paragraph (e) of Order M-1-e marked "Appeal—Reference M-1-e.
(b) Toll arrangements for the re-rolling of lithographic press plates are not permitted.
(c) Wall paper manufacturers can continue the cutting of designs on existing aluminum castings only if an obsolete roll is set aside and held for disposal at the direction of the Aluminum Branch. Obsolete rolls cannot be re-worked. Appeals for permission to use new castings must be made in same manner as detailed in (a).

Aluminum Order M-1-g released March 11, 1942

Aluminum pigments and paint were placed under complete allocation control by the Director of Industry Operations. This Order requires specific authorization for the manufacture, *use* or sale of aluminum pigment.

(*Continued on Next Page*)

Order freezes use of aluminum powder, paste and ink now in inventory and appeals presented under M-1-e will be denied in order that they can be reviewed and acted upon in accordance with the provisions of the new Order M-1-g, which applies specifically to such materials. Appeals should be directed to the Aluminum Pigment Unit, Protective and Technical Coatings Section. Chemical Branch, War Production Board, Temporary Building R.

Magnesium—Refer to Order M-2

No changes with respect to this metal. Experiments are under way to produce magnesium carbonate from somewhat low grade material in sufficient quantity to maintain normal usage in ink formulation. Magnesia is employed extensively in pigment manufacture and also as filler or reducer in printing ink. The list of scarce materials reveals magnesium at the top of the metal group followed by aluminum, nickel, chromium, copper, zinc, iron, etc.

Nickel—Refer to Order M-6-b

The printing and publishing industry is considered as an essential civilian industry with respect to this metal. We have been granted 10,000 pounds monthly. It is suggested that a thinner than normal deposit of nickel be adopted, in order to conserve this vital metal. We are not at all sure that the present allocation can be maintained beyond the next two or three months, and it is probable that next month this will be reduced perhaps as much as 25%.

Copper Order—Refer to M-9-c[1]

The supply of copper and its allocation for military, essential and civilian uses is being constantly and carefully reviewed by the Materials Division of the War Production Board. Curtailed supply and the increased demands of the War Program are now compelling further curtailment of even essential uses, and the elimination of all non-essential end uses. In view of this situation it has been necessary for the Copper Branch of the War Production Board to construe and enforce the Copper Order M-9-c very strictly. The effect of the policy will be, to totally eliminate the use of bronze leaf, powder and ink, in the printing, publishing and related industries[1]. The prohibitions apply to use as well as manufacture.

There is no change in the explanation set forth in OPM notice No. 18760, dated December 6, 1941, as to the Copper Order M-9-c and its effect on the following items:

Photo-engraving—limited to 70% of base period for duration of Order.
Electrotyping—Copper (Electro-deposition)—limited to 70% of base period for duration of Order.
Matrices for Linotype, Monotype, Founder's Type—limited to 70% of base period for duration of Order.
Copper Plate Engraving (Banknote, Certificate)—limited to 70% of base period for duration of Order.
Gravure, Electro-plating or Plates—limited to 70% of base period for duration of Order.
Brass Bookbinders Dies—limited to 70% of base period for duration of Order.
Brass Embossing Dies—limited to 70% of base period for duration of Order.
Wallpaper Copper Rolls, Brass Rolls, and Block Cutting Brass—limited to 70% of base period for duration of Order.

Authorization to use own copper scrap can be obtained by writing Copper Branch Reference M-9-b, stating kind of scrap, amount on hand or available and purposes for which scrap is to be used. Several appeals have been granted.

[1] *Editor's Note*—Under Supplementary Copper Conservation Order M-9-c-3, issued by WPB on March 28, the use of bronze powder, bronze paste, bronze ink or bronze leaf is entirely prohibited after May 31, 1942, in the printing and publishing industry. Because of some confusion existing with respect to application of M-9-c to the use of these materials, the Supplementary Order M-9-c-3 was issued on March 28, postponing for two months the prohibition against use of these bronze powder, bronze paste, bronze ink and bronze lead in the printing and publishing industry to permit consumption of inventory stocks. During these 60 days, printers and publishers may use 16⅔% (all from present inventory) of the amount they used in 1941.

Zinc—Refer to M-11-i[2]

Zinc pool requirements for March were increased over February on March 3rd (WPB 420) when producers were instructed to set aside 50% of their December 1941 production of high grade metal and 40% of all other grades. Metal becoming increasingly less available, and it is probable that all stocks will be under complete allocation within the next four months.[1] Zinc plates are not tight up to this date, but photo-engravers and lithographers should initiate maximum conservation programs in their use, and all printers and inkmakers must curtail inclusion of "lithopone" in ink formulations as this last item will be under allocation during the next few weeks.

[2] *Editor's Note*—The *Daily Metal Trade* of Cleveland in its March 31 issue reported that WPB on March 30 extended General Preference Order M-11, covering zinc to May 31, 1942, pending completion of a revised zinc order. It is also reported that Zinc Order M-11-j sets aside at present an amount equal to 60% of the January 1942 production of high grade zinc and 40% of all other grades for defense materials.

Chromium—Refer to M-18-a

Already strictly controlled, was placed under complete allocation system on Feb. 4th. Order is designed to prevent depletion of existing stocks and to control further the flow of this important steel alloy. Refer to the use of chromium in printing inks mentioned later in this report. No restrictions have been placed on chromium plating of printing plates or cylinders.

Toluene—Refer to M-34

The use of Toluene as a diluent for protective coatings (gravure inks included) was prohibited after February 1st.

ANPA Mechanical Conference To Be Held As Scheduled

Spiking a rumor, Manager W. E. Wines of the ANPA Mechanical Conference stated recently that the Conference would be held as scheduled at the Drake Hotel, Chicago, June 8-10.

Petroleum solvents have been substituted successfully in the production of gravure printing.

Lead—Refer to M-38-c

The March lead pool was set at 15% of January 1942 production. The use of lead in the graphic arts is limited to 90% of either the third or fourth quarter of 1941 (base period to be selected by each company). Items on list "A", namely: foil for tobacco and chewing gum wrapping, etc., limited to 50% of base period until March 31, prohibited thereafter.

This Order excepts electrotyping foil and molding lead from use restriction, also lead involved in pigments and ink driers. The re-use of lead in plates or type is not given an exemption and therefore limited to 90% of established base period. This Branch has asked that exception be extended to these items in the rewriting of the Lead Order, permitting the re-use of lead in plates or type in the printing, publishing and related service industries, including necessary replacement or loss in the re-used metals. Only secondary lead should be used.

Tin—Refer to M-43-a[3]

Items on List "A" such as: seals and labels, tin-coated paper and foil (excepting electrotype and molding lead) can be manufactured at the rate of 50% of the base period corresponding quarter of 1940, up until March 31 and none thereafter. Tin in "toning metals", electrotyping foil, molding lead, electrotyping solder, and "rust protective-lubricating" coating on stitching wire are limited to 50% of corresponding Quarterly periods in 1940. A new order[3] expected to be released shortly curtails drastically employment of tin in all items not directly needed in the War Program. Fortunately for our industry no primary tin need be used, and it must be emphasized that the following changes to the new Tin Order are merely contemplated and are subject to possible revision before the order is issued.

(a) *Electrotyper's Solder*—will be permitted to use 100% of corresponding quarterly periods in 1940, provided that after a date set out in the Order solder alloy will be approximately 38% tin and 62% lead rather than 50%—50% alloy now most generally employed.

(b) *Electrotyper's Foil*—will be permitted 100% corresponding 1940 quarterly period provided alloy be 35% tin and 65% lead. The currently most common 40% tin—60% lead alloy may be used, but none manufactured after a date set forth in Order.

(c) *Toning Metal*—Present 50% restriction to be removed enabling usage of secondary tin to sweeten re-claimed metals in so far as the aggregate will not be in excess of corresponding 1940 quarterly consumption.[3]

(d) *Stitching Wire*—Present 50% restriction on tin for coating wire has reduced amount of tin for protective lubricating coating to an alloy of 50% tin—50% lead. It is expected that future restrictions on the use of tin will require a further reduction in tin usage for this purpose. It is understood that wire for match book staples may not be tin coated.

[3] EDITOR'S NOTE—As of March 18, Tin Conservation Order M-43-a Amended was issued by WPB. See article (elsewhere in this issue) entitled: "Use of Primary Tin in type metals prohibited."

Rubber—Refer to M-15-b

Order M-15-b, Amendment No. 5 effective March 1st, absolutely prohibits the processing of crude rubber for any but certain specifically permitted purposes. Rubber manufacturers are permitted to process 80% of the average monthly amount of crude rubber processed during the year ended March 31, 1941, for the manufacture of cutting rubbers, offset and newspaper blankets, printers' rollers, suction cups for printers' equipment, rubber solution for wet plate negatives, and printing plates (including cements, but excluding rubber stamps, box dies, band caters).

There is as yet no Order restricting the use of reclaimed rubber. Such an Order is in process of preparation, however, and should be issued shortly.

It should be realized that any changes in the Rubber Order, in so far as it affects any but direct War orders, will be in the direction of more stringent *regulations and more drastic reductions in allotments.*

Explanations of "eligibility classification section (e)-9 under list "A", of original Rubber Order, have been obtained from the Rubber & Rubber Products Section of the Office of Price Administration, with respect thereto of rubber tires for trucks used in the delivery of printing material:

(1) Trucks exclusively used to deliver materials to and from a printing establishment are eligible vehicles provided no deliveries are made to the ultimate consumer for personal, or household, or family use.

(2) Trucks used exclusively to deliver newspapers to post-offices, stores, and news stands are eligible vehicles provided no deliveries are made directly to subscribers.

(3) Trucks used for Sunday rural deliveries of newspapers are ineligible where deliveries are made to individuals as well as to distributors.

Glycerine

This material is becoming extremely critical. The manufacturers of glue-glycerine rollers are at present working on a 1940 basis which represents a 30% cut over 1941. An additional 30% cut is expected which will mean a 60% restriction in the use of glycerine, comparing 1942 and 1941.

Adhesives

No serious shortages of adhesives employed in bookmaking or magazine binding have been experienced in graphic arts industries up to this time. However, materials may eventually become scarce as the high-grade hide glues were imported from the Far East, and future supply is doubtful. Glue makers also use glycerine, sorbitol and starch, the main source of which is probably tapioca. These manufacturers have developed substitutes including medium and low-grade glues for the critical higher grades, and many substitutes for glycerine are undergoing tests. No problems at hand, but all graphic arts concerns using adhesives are urged to practice rigid economy in their application and usage.

Fabric

The enormous yardages of uniform, tent, parachute and camouflage materials ordered by the armed forces have put a heavy load on the looms of the Nation. Recently the Government is reported to have placed orders for nearly 19 million yards of camouflage fabric of the type weave generally known as "osnaberg". This material is similar in structure to the book-cloth weaves known as the buckram class, and such large orders may preclude the weaving of the usual book-cloth fabrics. This Branch is now working with the WPB Textile and Chemical Branches, also the book-cloth manufacturers seeking to establish definite grades and weave structures of "grey" goods (unbleached base goods for book-cloth) that can be available on an annual allotment basis. Likewise, the Branch is seeking to determine the type and variety of colors that will be available for production of base colors desired in book-cloths.

Situation in Printing Papers

Supply and demand situation in printing papers is reasonably balanced. Occasional shortages, due largely to maldistribution and hoarding in some special grades of paper, have occurred. In general, it can be said, that there is no shortage of printing paper. As a matter of fact, there is a surplus of book paper and of newsprint, and the prospects are for an increasing surplus in these lines. This must not be taken too optimistically as the shortage of labor, transportation, power, and critical materials may slow down the present high production rate of the paper industry and bring about a diminishing of the supply of printing as well as other papers.

Board (bookbinding and press)

No restrictions have been placed on binder's pasted, or chip board. With acceleration of the waste-paper recovery program under way, the supply of raw materials should be sufficient to meet most demands.

Carton Stock (for civilian usage)

So large a proportion of the war production items are being packed in cartons that the container industry is hard put to keep abreast of governmental demands. Considered one of the major "bottlenecks" in the paper field, it probably won't be cleared up readily, and cartons or carton stock will be held to a minimum for every thing except war program items.

Ink[4]

The source of many basic ingredients employed in the formulation of printing and lacquer inks is outside the United States, and such sources of supply are either shut off, or drastically curtailed. Furthermore a large number of chemicals and materials involved in the making of intermediates, dry colors, binders or vehicles are needed elsewhere in the War Program, and the inter-relationship of the chemicals and metals employed in ink manufacturing make it difficult to evaluate where shortages will occur. Some shortages are easier to fore-see because of curtailed supply of the basic materials, and an ink order[4] is being considered that will effect approximately a 30% cut in the use of certain colored pigments but not necessarily a comparable percentage cut in inks produced whose formulations include these pigments. There is no intention to affect a horizontal cut of all colored inks and, undoubtedly, ink makers will be able to devise substitute materials that will permit continuation of reasonable colored ink consumption. Substitution of materials may result in the lowering of some of the rigid tolerances that have existed with respect to cleanliness, lightfastness, alkali-proof, etc., but cooperation between designers, buyers of printed matter, and printers will permit the continuation of color printing under the War Program.

[4] *Editor's Note*—As of April 1, Printing Ink, Conservation Order M-53 was issued by WPB. See article (elsewhere in this issue) entitled: "Ink Conservation Order for Printing Ink Makers."

Transportation

The country is faced with a probable shortage of railroad cars in the present emergency and it is necessary that the fullest utilization be made of the existing car supply. We should recognize this problem as a major issue and make certain that every company is doing its part to prevent a severe car shortage. Curtailment of truck production, rationing of tires and the control of vessels by the Government will bring added tonnage to the Railroads. We urge all printers and publishers to cooperate with suppliers so that each incoming or out-going car be loaded to its greatest practical capacity. Also make certain that railroad cars are not used for storage purposes, and that out-going cars are loaded with the least possible delay. The Printing & Publishing Industry is a heavy user of rail transportation and an improvement of only 10% in the utility and release of freight cars used by this industry will at once increase the availability of rail transportation by a very large amount. A good job has been done thus far, but we do not believe that maximum efforts toward effective utilization of freight cars has been fully accomplished.

WHAT EXECUTIVES CAN DO *to Help Win the War — Mechanical Department Executives Have Big Opportunity to Conserve Critical Materials—Possible Utilization of Excess Floor Space for Making Small Parts for War Equipment Suggested*

By LEON A. LINK*

*Principal Production Specialist, Newspaper Section, Printing and Publishing Branch, WPB, Washington, D. C. Abstract of speech delivered before Southwest Mechanical Conference, Los Angeles, Calif., April 11, 1942.

YOU and I have gathered here to discuss and consider *one phase* of the most important question that has confronted us for many years—the winning of the war. The particular thing I want to talk about is conservation of materials. Some have asked: Why is it that the restrictions on supplies seem to be so much more acute at the outset of this war than they were during the entire first world war? Weapons and methods of war have advanced just as fast as have other things and this war is a mechanical war to a far greater degree than was the last. Twenty-five years ago man power at the fighting fronts, to a larger degree than it is today, was the determining factor. Properly equipped man power is always effective and in this war the equipment factor is more important than it ever was in any previous war. I think you will all appreciate that the airplanes must be larger, better equipped, faster—and there must be many more of them. The tanks are also much larger and more complete and there must be more of them. All through the entire set-up we need much more mechanically than we did before.

We not only need more but we must also have the ships to deliver this equipment, as well as the men, to the points where it can be used most effectively. We had only to cross the Atlantic in the first war. This time we have not only that to do, but we must also go on to Russia. In the Far East we must deliver equipment and men to points on the other side of the Pacific. If you will look at a globe, you will recognize that the Pacific Ocean covers nearly one-half of the world, so it's a much larger job and we must have much more equipment.

The President has said, "We are the Arsenal of Democracy." That means we must make the supplies for not only our own forces but we must also equip many of the men fighting on the side of the United Nations from other countries. We must deliver most of this equipment with our ships. Naturally, the war situation causes some difficulties in making these deliveries but they are being made. So if we are going to have the material to make the equipment, then it is necessary that we get along without much that formerly went into private industry, such as newspapers. The demand for war supplies is increasing and we will have to get along with still less, so we might just as well be learning how.

Utilizing Excess Floor Space

There are numerous newspaper plants that have excess floor space that might be turned over for placing machinery designed to make many small parts needed for war equipment. Some plants have considerable space that is not in use. Sufficient electric power lines are likely available in these buildings and they are heated, lighted and ready. When you go home from this meeting, why not discuss this possibility with the management of your newspaper?

Many newspaper plants, especially the larger ones, have equipment in their machine shops that could be used part time at least for making small parts, such as cams, rollers, etc. You have the lathes, drilling machines, cutting machines and other equipment. Don't pass this off lightly by assuming there is nothing you can do in your plant. Many of us make many small parts for our own use. Let's look into this.

Because of war regulations, nearly every newspaper in the country has experienced a reduction in the amount of advertising. Smaller papers, with less people employed, has been the result. Maybe some of this excess labor, the mechanically skilled, might be employed on at least a part-time basis in doing this work. If it could be done, that would be a contribution by both management and labor to our cause. It would help increase this much-needed production and probably would be a personal benefit to all involved.

In the Pressroom

Our pressrooms present an opportunity for great savings in materials, including paper, rags, oils, ink, press blankets and rubber. I am not advocating the use of too little oil which would result in damage to expensive and hard-to-get parts, but make the oil used do its job and don't waste it. It takes oil to run planes and tanks and other fighting equipment. Treat the oil like it was yours, also the press. A saving of paper is important because it requires pulp to make print paper and pulp is also used in making munitions. It requires cars to haul paper and we need cars to haul war supplies. When there is excess waste, it requires additional wire to bale it and wire is important to the equipment our soldiers and sailors need. Rags are necessary to keep our fighting machinery in good shape.

Ink, especially colored inks, contain ingredients that are vital to the manufacture of munitions and the War Production Board has just recently notified you of colored ink restrictions that will bring about a reduction of approximately 30% in certain materials used for this purpose. Some newspapers have requested the comic syndicates to eliminate the backgrounds in the comics in order to conserve colored ink. Others will reduce the four colors to just plain black.

Nearly every make of press blankets contains materials very important to the war effort, including cork, rubber, felt and other ingredients. The rubber rollers on your presses should be nursed along and given extreme attention. Make sure you are not taking off excess rubber in regrinding these rollers and keep spare rollers in cabinets or boxes where they will not be exposed to dirt or excessive heat. Our offices in Washington are in the same wing with the rubber division and we are daily reminded of the acute rubber situation. The scarcity of rubber is not just talk and one of these days we will become very conscious of this fact, especially so if there is any doubt in your mind at the present time. Our fighting equipment will require all the rubber we are going to be able to get.

Engraving Department

Engraving Departments can also contribute to substantial savings and this is very important, because all materials used in this department are vital to war needs. Careful stripping of negatives on flats to make sure all available space is covered will do much to conserve zinc. Let me say to you, the importance of this can not be over-emphasized. I understand a paper in the East is painting the open spots on line cuts with asphaltum in order to prevent the acid from eating this zinc out and losing it. I think you will have to determine for yourselves how practical this might be in your own plant. The celluloid used for masking is becoming scarce and should be conserved. I understand a new development which eliminates much masking is now being used by a number of papers. Proper care of saw blades and router bits will do much to lengthen their time of service.

Keep printing metals within the industry.

Don't force them. That is also hard on the belts and we need the leather to make shoes for fighting men.

Composing Room

Many small intricate parts, which are made of metals vital to the war effort, are to be found in composing room equipment. Typesetting and typecasting machine matrices are made of brass and a special effort should be made to conserve them. I would suggest a sign be posted in your composing rooms which would read something like this: "Pick up a mat, it will make a bullet." If your newspaper can get along with less matrices there will be more brass available for our boys—and they need it badly. A spaceband, which is made of high grade steel, contains enough metal to make a vital machine gun part. Be careful of spacebands. Do not overheat metal in your machines or remelt pot. Lead, tin and antimony are all exceptionally vital materials and no doubt more drastic restrictions of their use will be applied by the War Production Board. There is hardly an item used in the composing room today that does not contain material our fighting men need. Each of you men who comes from this department will be doing a patriotic act if you put into effect measures that will result in saving of all these materials as soon as you return to your homes.

Stereotype Department

What is true in the other departments also applies to the stereotype department. You men molding the mats, casting the plates and doing the finishing work are also working with materials that are vital to our war needs. If any part of the machinery you are operating is broken, that part will have to be replaced by another made of material our fighting men need. The metal in your department, like that in the composing room, consists entirely of ingredients which are needed.

Electrical Equipment

Each mechanical department of the paper uses electrical equipment. It is highly important to the operation of the plant, yet all types of electrical equipment are likewise very important to our war effort. I am told by men in the Electrical Division at Washington that many small motors are needed in bombers to operate the different moving parts and appliances. There are motors in tanks to control fighting and operating features. Fighting ships, of which we are building many, also require many motors. And in addition to the motors, all other items of electric equipment are used extensively, so it is extremely important that everything electrical be conserved by proper maintenance. Whenever anything electrical is ordered for replacement by private industry, you are likely asking for something our fighting forces need. If what I hear is correct, the Government is not going to let you take it away from them. I know many plants have eliminated much electrical replacement by regular periodical checks of the equipment to prevent trouble before it occurs. Heating elements in your typesetting and typecasting machines and stereotype pots should be regularly checked. Keep an eye on your controls in the pressroom. Many essential parts are included in those panels. It is quite likely that orders may be issued to conserve the use of electricity in certain localities and you should be giving that some thought.

Give Machines Best of Care

Restrictions have been placed on the sale or purchase of most all newspaper machinery used in all departments of the newspaper and you are just not going to be able to buy new machinery. For that reason alone it is very important that machines be given the best of care. There never has been a time in the history of our business that conservation of supplies, parts and machinery was so important as it is now. Your country is asking this of you and certainly it has a right to expect your help.

Our offensive is just getting under way. Our factories are fast becoming converted to making fighting equipment. They are going to need much more material of all kinds each month than they did the previous month to take care of this stepped-up production. So the supply situation is not likely to ease up. Private industry, and that includes newspapers, will have to decrease its requirements for this material in proportion to the stepped-up schedules of those concerns engaged in war work. There are many so engaged and there will be many more.

Not the Other Fellow's Job

Most of us have spent a greater part of our lives working in some department of a newspaper. Our minds have been occupied with problems of cost, appearance of the printed paper, elimination of errors and getting editions out on time. We still have that to think about. In addition to that, we have as individuals and as a Nation, a much more serious problem facing us now—the preservation of this Nation. It is not the other fellow's job. It is our job. We can and should contribute much to that cause. Many of you may have ideas that I have not touched upon, which, if applied to our industry, would be helpful in bringing the victory which we hope will be ours. We would appreciate your conveying those ideas to us.

When the boys come marching home we will feel much better standing on the sidelines if we, in our own hearts, can feel that we contributed all we could in the winning of the war and thereby be privileged to continue to live as a free people. How far distant that day is, in a great measure, will be determined not only by what our fighting forces may be able to do, but also by what you and I do on the home front. Regardless of what we contribute, we have still done little by comparison with the men at the front, those flying the planes or manning our ships. We have suggested some things we think might be helpful and you have ideas of your own you can apply. Don't you think we ought to get at this job now?

WPB Order Affects Orders for Printing Machinery

THE War Production Board assumed control over the manufacture and distribution of many types of industrial machinery on April 9 in an effort to stimulate conversion of machine tools and skilled labor to the output of war materials. Under General Limitation Order L-83, *effective immediately*, manufacturers are prohibited from filling any orders for the production or delivery of certain types of new, second-hand or reconditioned machinery unless they bear WPB approval.

Approved orders include those for the Army and Navy, certain other government agencies, the governments of the United Nations, Lend-Lease operations, and any orders bearing an A-9 or higher preference rating issued at any time on an original PD-1, PD-1A, or P-19h certificate or on a PD-3 or PD-3A certificate countersigned before April 9.

Certain orders involving less than $200, and, in the case of pulp and paper making machinery, less than $1,000, are not restricted. Likewise, no prohibition is placed on deliveries of less than $1,000 worth of parts to repair or maintain a single piece of existing machinery or a single piece delivered hereafter, or on deliveries of parts worth more than $1,000 in cases where there has been an actual breakdown or suspension of operations because of damage or destruction of machinery.

While several industries are affected by the order, machinery related to the printing industry is covered as follows: (1) Packaging and labeling (except machinery to be used to package or label fruits and vegetables packed in hermetically sealed and heat sterilized containers) —orders in excess of $200. (2) Pulp and paper making—orders in excess of $1,000. (3) Paper converting—orders in excess of $200. (4) Printing and publishing—orders in excess of $200.

Manufacturers are not prohibited from delivering machinery to a distributor for the purpose of filling an approved order actually received or to replace machinery delivered by a distributor on an approved order. However, in order to fill orders now on their books which do not fall within the approved classification, manufacturers must obtain specific authority from the Director of Industry Operations after submitting a complete description of the machinery involved and the use for which it is intended.

The restrictions on deliveries apply on all types of orders—purchase, lease, rental, renewal of lease or rental, or otherwise.

THE NEWSPAPER *Printing Equipment and Supplies Situation*

(As of March 16)

ANY attempt to construct a word picture of the newspaper printing equipment and supplies field necessarily must be prepared for momentary consumption. The industrial picture under war economy, in which the manufacturers of printing equipment and supplies are participating prominently, is changing rapidly because of the ever increasing pressure of armament needs. As the result of replies received in answer to questionnaires submitted by *Printing Equipment Engineer* to a number of equipment and supplies manufacturers, it is apparent that the printing industry is now commencing to "live off the fat in the camel's back" so far as some of the manufacturers of new newspaper capital equipment is concerned. A number of manufacturers state that when the machines that already have been completed or those which are in process of manufacture have been disposed of there is little likelihood of further manufacture until after the present emergency has been terminated.

All manufacturers replying to the questionnaire have stated unreservedly that since the printing industry is an essential civilian one and is so recognized by the War Production Board that they will devote all of their resources, so far as permitted in view of their war contracts, to supplying repair parts and supplies and the service of technicians so that present machines and equipment may be kept functioning normally.

Because some printing executives may not yet fully understand Government's civilian program as it affects the printing industry, under the war emergency, we quote from a report of the October (1941) meeting of the National Printing Equipment Association at the Palmer House, Chicago. At that time, Norbert McKenna (then chief of the Pulp and Paper Branch of O.P.M.) stated that for the duration of the emergency all present plant investment would be frozen. New equipment can be obtained only in case of a breakdown. Printing equipment manufacturers, however, will be encouraged to sell printing equipment to Latin-American countries. The repair of printing presses will be encouraged.

Since then, in the revised A-10 Rating Under Preference Rating Order P-100, under date of December 18, 1941, issued by W.P.B., it appears that the provisions of this order do not apply to the acquisition of capital equipment, nor to the replacement of material in the existing installation unless such equipment is beyond economic repair. In extreme cases, it appears that in the destruction by fire or other causes or a serious breakdown which would render a piece of equipment "beyond economic repair" that relief could be obtained by utilizing the A-10 Rating. All those with whom the writer has talked concerning such an emergency, however, are not agreed that all equipment could be replaced in this manner in every case.

Apparently, at the moment, there is a complete "blackout" of several types of new capital equipment items. In some instances, new equipment may be available. Several manufacturers state that when their present stock of finished machines has been disposed of no more may be had.

We doubt very much if anyone outside of W.P.B. has a complete picture of the new printing equipment which is now available. Such knowledge as is possessed by the trade with respect to new equipment is based largely on hearsay. In some cases, manufacturers may have a limited quantity of capital equipment which was completed before conversion to war work.

It seems to be a fact, however, that no new newspaper printing presses are now available for the simple reason that such presses largely are built to order. The use of factory facilities for such activity, of course, would interfere with war work upon which printing equipment manufacturers already are engaged from 60% to 100%.

It appears that the procedure for obtaining replacement of irrepairable capital equipment would be, first of all, to get in touch with your manufacturer or supplier to determine whether or not the replacement can be effected by normal means, by means of the A-10 Rating under P-100 Preference Rating Order, or if it will be advisable to attempt using the PD-1-a form for direct application to W.P.B. in Washington for a rating which will enable you to secure the new machine.

New capital equipment, according to Acting Chief George Renard of the Printing and Publishing Branch of WPB, may be difficult to obtain if critical metals are involved.

Under the present emergency, it may be necessary to replace destroyed equipment, such as a printing press, or a press which is beyond economic repair with used equipment if it is to be had.

Immediately following are printed the comments of equipment manufacturers and suppliers to the trade. These replies do not constitute the entire number of replies received. Some of those replying did not wish to be quoted and their requests are being respected in the preparation of this article.

Keep printing metals within the industry. Dispose of them to your regular metal supplier.

Composing Room Equipment

SALES Director Wm. A. Duboc, Printers Equipment Div. of Hamilton Mfg. Co., Two Rivers, Wis., manufacturers of composing room type cabinets, cases, tables and the like, states:

"Our policy is to continue full service as long as possible on our composing

WASTE RUBBER CONSERVATION SUGGESTIONS

By E. BYRON DAVIS*_____

*Vice President, Ideal Roller & Mfg. Co., Chicago.

IN newspaper plants, great care should be taken of rubber blankets, press rollers, cutting rubbers and other materials of which rubber is an integral part. All waste rubber materials should be collected and sold to reclaim rubber companies—not for the very few cents you will be able to get for them—but in order to guarantee that when you do need some essential equipment or supply it will be available, because you were foresighted enough to see that those waste materials got back into circulation rather than to throw them away or burn them up.

Roller grindings should also be saved and disposed of in this way. At the present time, you may not find even the reclaimed rubber companies interested in these grindings, but in a few months they may need them. Their funds at the present time are probably stretched to the breaking point under the weight of new and unforeseen demands for reclaim. Naturally, they are taking those materials that are most easily and quickly reclaimed. When those are gone they will want the other materials such as the roller grindings.

room equipment as long as it does not interfere (which it has not done so far) with our government contracts. Replacement of materials is becoming increasingly difficult and we may have to restrict our line to its more important items. Most of our composing room items can be made of wood if necessary. Some items, however, might not be satisfactory in wood and would have to be dropped if no steel were available. We cannot estimate when this might be necessary because we are restricting steel to essential items and stretching out available supplies as long as possible."

Composing Machines

Vice President A. T. Mann, jr. of Intertype Corporation, tells us that "At the moment, we are manufacturing on a much slowed down production schedule of practically all models that we normally offer the trade. We do not know what day, however, we may be instructed to cease the manufacture of typesetting machines. We do know that within a comparatively few months we probably shall not be able to get raw materials with which to continue on with the manufacture of machines, even if we were permitted to make them.

"At the present time we can furnish all repair parts for machines. If the Government's announced policy of permitting us to manufacture parts and matrices sufficient to maintain newspapers continues on (as we have every reason to expect it will) we should be able to continue to serve the printing trade by taking care of orders received for repair parts.

"An A-10 rating is required on purchase orders for machine parts as well as for matrices.

"The extent to which war production may continue to draw on our man power, as well as our factory equipment, probably will decide more than anything else, to what extent even service in shipments may be slowed down. There is a physical limit to everything, unfortunately, but our first thought is and shall continue to be of the printing trades, and we shall let nothing interfere with our service to them except the direct interests of our National welfare."

Mergenthaler Linotype Company, manufacturers of line-composing machines authorized the following statement in reply to *Printing Equipment Engineer's* questionnaire:

"Our factory and agencies are fully prepared to meet needs of printers and publishers within conditions laid down by government authorities. We are making prompt shipments on all such orders. Cooperation of customers in adding a signed priority statement is urgently requested on all orders covering items required for maintenance, repair or operating supplies. Such cooperation saves delays and is vital to provide further materials of manufacture."

Manager C. E. Murray of Linograph Company, Davenport, Iowa, states his company, at the present time, can furnish all models. Repair parts can be shipped promptly under A-10 Rating.

Fluorescent Lighting Fixture Production Terminated

Fixtures and Parts for Existing Installations Permitted

UNDER General Limitation Order No. L-78, WPB on April 2 ordered termination of production of fluorescent lighting fixtures except for essential uses, or on contracts accepted prior to April 2 on which work had begun.

On and after the 61st day following the date of issuance of the Order, no person shall sell, deliver, ship or transfer any fluorescent lighting fixture or any component part of any fluorescent lighting fixture, *except:* (1) Any fluorescent lighting fixture and any component part of any fluorescent lighting fixture which is sold, delivered, shipped or transferred pursuant to an order or contract bearing a preference rating of A-2 or better, or (2) Any component part of any fluorescent lighting fixture which is sold, delivered, shipped or transferred *for the purpose of Maintenance or Repair.*

For a period of twenty days from April 2, manufacturers may also produce fixtures and parts from materials now on hand.

The order is expected to result in the saving of 35,000 T. of steel, 2200 T. of copper, 5200 lbs. of mercury, small amounts of aluminum, zinc, cadmium, and bakelite, and release the facilities of the industry for conversion to the production of essential war articles.

Approximately 2000 companies produce fluorescent lighting units and parts. Relative youth of the industry prevents assembling of accurate data on recent production and sales. It is estimated by WPB Building Materials Branch, however, that the 1942 dollar volume on an unrestricted basis would have been $100,000,000, representing 10,000,000 units.

With respect to the outlook for the next six months, Mr. Murray observes:

"Parts delivery and repairs can be taken care of promptly during the next six months, and we feel quite sure that provisions will be made to permit us to acquire a sufficient amount of material to continue production of repair parts as they are required. Delivery of special items undoubtedly will be eliminated or drastically curtailed.

"Developments in the last several months have made it absolutely necessary to devote as much time as possible to the production of equipment which is so badly needed by our armed forces, and in this connection, I feel sure that sacrifices will be necessary on the part of every manufacturer and every user of his equipment. It will be our aim, however, to keep every one of our users' machines rolling, and I feel certain that regardless of how difficult it may be, we will find ways and means of doing that as time goes on."

I. Bendow of Linotype Parts Company, New York, states that his company is furnishing most all repair parts for line-composing machines. Prompt shipment can be made on 90% of orders. A-10 Rating Under P-100 Preference Rating Orders is required. He feels that his company will be able to supply most parts required during the coming six months, but there may be some slight delay in executing orders on a few items.

Proof Presses

General Manager E. O. Vandercook of Vandercook & Sons, Chicago, reports his company can furnish nearly all models of Vandercook proof presses from stock built up some time ago. All repair parts for machines can be shipped promptly. The A-10 Rating is not required except for ball bearings and parts or supplies involving the use of rubber.

"There is now no new production of Vandercook proof presses," states Mr. Vandercook, "and we will probably run out of most models within six months. We will endeavor to keep complete stocks of repair parts on hand. Our service organizations working out of Chicago and New York will be maintained."

Secretary W. A. Sittig of H. B. Rouse & Co., Chicago, manufacturers of bandsaws, mitering machines and other equipment items, states that all models of machines can still be furnished. Repair parts with prompt shipment can be furnished with A-10 Rating on purchase orders. The firm is in a good position to make deliveries during the next six months.

Type Metals

VINCENT J. RYAN, Manager of the Federated Metals Div., American Smelting & Refining Co., Whiting, Ind., states that in view of WPB's recent Tin Conservation Order M-43-a as Amended, issued under date of March 18, the printing industry should get along for the balance of the year. He feels the type metal manufacturers will be able to supply the metal required for that length of time.

A. Hoyt Levy of United American Metals Corporation, writing under date of March 13, discusses the type metals situation as follows:

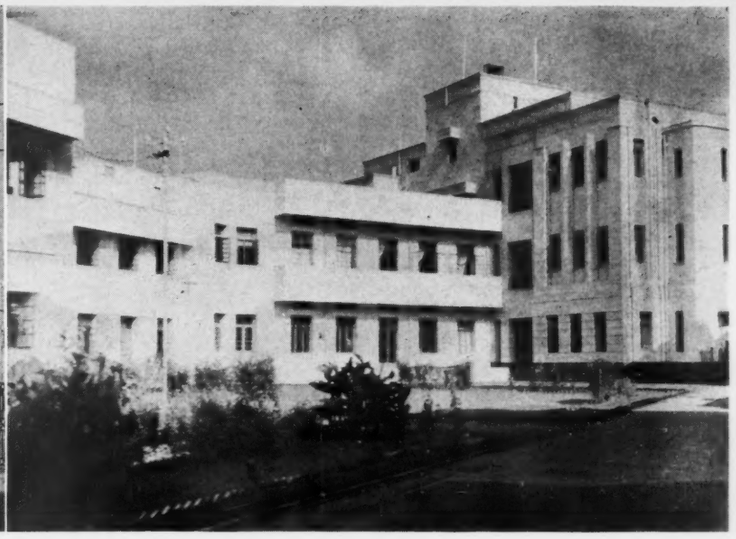
"In so far as tin and antimony are concerned, all industries are subordinated to the need of these metals for war purposes.

"Nobody, not even those who have been handling the situation in Washing-

(*Continued on Page 19*)

Return your stagnant standing matter to your regular type metal manufacturer.

At left is front elevation of the Kasturi Buildings in Madras, India. The cream stone front is faced with green marble. The highest portions of the buildings reach a 100 ft. elevation. Lobbies, halls and staircase are of marble with mosaic work. Oil paintings adorn the walls. Modern elevators and indirect lighting add to the visitors' comfort and convenience.



At right is part of a section of the Kasturi Buildings in which are published The Hindu. *These buildings with landscaping appear to be as fine as any in the United States in architectural beauty. In the accompanying article Mr. Broad states that Proprietors K. Srinivasan and K. Gopalan truly have a plant which any of our American publishers would be proud to own.*

The Hindu, India's Leading Newspaper, is Printed with Modern Equipment under Supervision of American Mechanical Superintendent—Interesting Notes on Indian Customs

By M. G. BROAD*

*Mechanical Superintendent, *The Hindu*, Madras, India.

IN September 1939, I was approached by my friends of The Duplex Printing Press Co., Battle Creek, Mich., to enquire whether I would be interested in considering a position as Superintendent of an Indian newspaper. I was filled with a mixture of doubt and desire because I was truly reminded by the Duplex Company I would be employed in a country at war with Germany and I should be on the other side of the world, far away from Uncle Sam and my many friends. Inasmuch as I had to make up my mind almost immediately I let the desire get the better of the doubt and came to India. Now, many months later whilst sitting in my office, I feel as though I should pass along to my friends in America, "the land of newspapers", my findings here.

It has been my privilege to visit Europe and now the East and Far East. I assure you the latter is past all explanation, and imagination—climate, beauty, vegetation, flowers—the like of which one never sees anywhere else except in the East, which often is called the land of mystery.

My wife and I sailed from Los Angeles on January 8, 1940 and our next touch of land was Manila, 21 days later. The Atlantic Ocean is a mill pond compared to the Pacific. Why the name Pacific was given to that stretch of water which separates the shores of America from the Philippine Islands to me is a mystery. This may be because one sails for three long weeks without ever seeing a ship or land. It is quiet, but certainly not pacific. I did not think there was so darn much turbulent water in the whole world.

If I were one of those statisticians who every now and then break out in a rash and tell us the newsprint used on such and such an edition would reach around the world and the ink used would float a boat 62⅓ ft. long, etc., I would tell you how many times the water in the Pacific Ocean would cool the casting boxes in the stereotype department of *The Hindu*. But then I am not a statistician and you should be thankful. From Manila on to the Dutch East Indies and then Bali, the Isle of Romance where beauty, happiness and complete satisfaction of living truly exist.

Editor's Note—The accompanying article by M. G. Broad was sent from Madras, India, on Nov. 24, 1941 and reached Cleveland Monday, Feb. 9. The manuscript and photographs were sent by air mail via Hong Kong and were passed en route by censor.

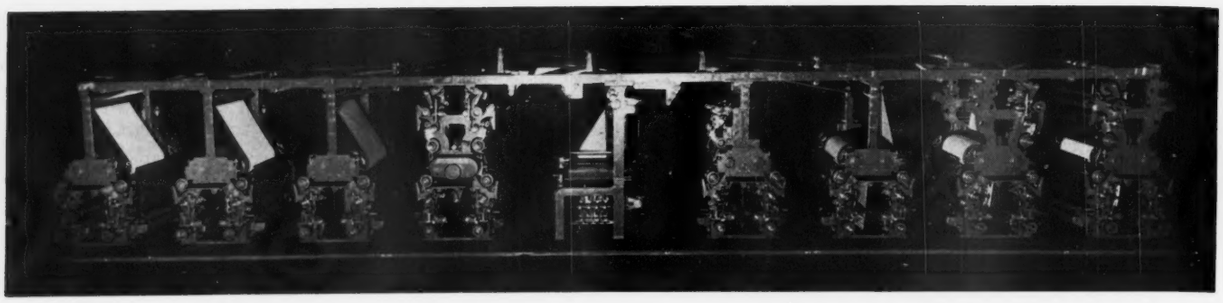
Formerly, Mr. Broad was associated with the *Nassau Daily Review*, Long Island, N. Y. His last article appeared in the August 1934 issue of this magazine while he was serving as pressroom superintendent of the *Review*.

Mr. Broad is well known in the Eastern section of the country and his mechanical executive friends as well as other newspaper executives will be glad to read this article about his present connection in India.

Mechanical Superintendent M. G. Broad of the Madras (India) Hindu, *is shown here with several Balinese women while on a visit to the Dutch East Indies. In the accompanying article he describes delightfully some of the customs of the Far Eastern people.*

Madras a Mixture of Old and New

After six weeks of sailing the seas, we arrived in Madras, India, which was to be our home for some years to come. What would we find? Would it be an old,



Despite high year-round temperatures (from 90 deg. to 110 deg. in the shade), Mechanical Superintendent M. G. Broad of the Madras (India) Hindu *states the Duplex press is operated at 30,000 copies per hour. Lubrication is one of the major production problems in the plant.*

dirty city, with its thousands of starving people, with old ideas of the East, with unsanitary homes, bad food and its subsequent diseases, as I had been told by those in New York? Or would the dream I had of a fine modern city and an up-to-the-minute newspaper be before my eyes? Well, it is a mixture of both. In the last 20 years India has made wonderful strides. Whilst there are a lot of hungry people, there is much progress. One finds modern hotels, which, whilst of course are much smaller, nevertheless compare favorably with my old hang-out, The Commodore, in New York. We have our air-conditioned cocktail bars and dining rooms and we dance at night to orchestras which surely remind one of Sammie Kay, Ben Bernie and all the Lads. Our homes are very large and of course are airy on account of the climate. We enjoy all the convenience of a California real estate development without the cramping, as homes are built far apart and one generally enjoys a garden, or, as we call it, a compound of at least an acre.

Modern Newspaper Building and Equipment

Arriving as I did at 6:30 a.m. on Friday, February 23, 1940, my first desire was to meet my publisher, the gentleman for whom I had travelled 13,000 miles and with whom it was to be my pleasure to work on the greatest newspaper in all India. But no, that was not to be, at least not yet, as I was told I must wait until after 2:30 p.m., as it was inauspicious to meet him earlier, and so I waited.

At 2:30 I journeyed to the offices of *The Hindu*, where I found as fine a newspaper building as can be seen in any part of the world. With its cream stone front faced with green marble, towering to a height of almost 100 feet, with its lobbies, halls and staircase of marble, its mosaic work, its oil paintings, its modern elevators and its indirect lighting, it was a sight I shall never forget. Equipped as it is with every modern piece of machinery that money can buy, K. Srinivasan and K. Gopalan, the proprietors, truly have a plant which any of our American publishers would indeed be proud to own. There are 16 Linotypes including Blue Streak models, the best of stereotype equipment, a top notch photo-engraving plant and a 32-page Duplex Unitubular Press equipped with balloon former and capable of producing multicolor work. The press is built on sub-structure, with automatic tension control and was erected by Harvey Larke of the Duplex Printing Press Co., who made the journey to India expressly for this purpose. I have often thought what a very fine job he accomplished here. Whilst in any American city he would have at his disposal the best machine shops, such conditions do not exist here.

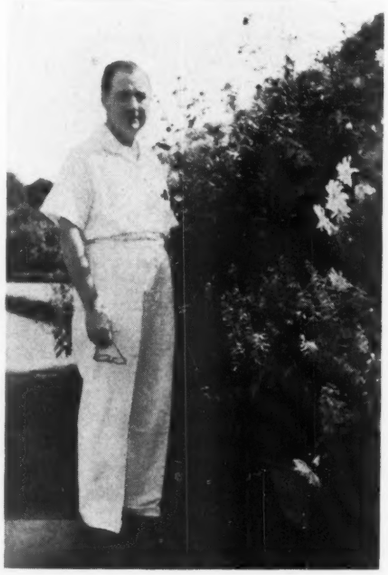
Paper Printed in English

There are 500 employees in *The Hindu*, all of whom are Indian excepting the writer. This paper is the national organ of the whole of India and celebrated its Diamond Jubilee last year. With a circulation of 50,000 daily, distributed over an area of almost 1,000,000 sq. mi., with four editions a day, one can judge what a herculean task confronts our circulation department.

Of our business and editorial departments, I am proud to say we have many of the keenest minds in India. In the mechanical department a few of the men speak English, others speaking Tamil, Telugu or Hindustani. I am sure you can well imagine what a wonderful job is being done in printing a newspaper, all in English, under these conditions. Can you imagine a New York daily being set in Tamil, by American linotype operators? However, in spite of these conditions, we seldom have any typographical errors in *The Hindu*. We check, double-check and then finally check all over again.

Whilst, of course, the American mechanic is capable of using his own judgment and is expected to do so, such is not the case with the Indian mechanic. He has been taught to obey instructions, and no more, and he does an excellent job of it. It is therefore imperative that men in key positions be well trained, in order that those under their charge may be properly instructed. It is truly a situation where executive ability counts and I am most grateful to my old employer, J. E. Stiles, publisher of the *Nassau Daily Review*, Long Island, N. Y., for the executive training I received during the many happy years I spent with him.

All told, publishing a newspaper in India is much the same kind of a job as in the land of Uncle Sam. There are, however, a few fundamental differences. News is of first importance and, whilst advertisements are of course accepted, they are *not* solicited. To the reader, whatever he may read in his newspaper, he can be quite sure it is the whole truth. One will not find anything of a sensational nature and I am quite sure Walter Winchell would be a "forgotten man" in India.



Mechanical Superintendent M. G. Broad of the Madras (India) Hindu, *the largest daily newspaper in India, enjoys his garden. In India a garden is called a "compound" which usually consists of at least an acre of ground. As a result, houses are built quite far apart.*

Supplies Purchased in U. S.

In the past, practically all newspaper supplies for Indian newspapers, such as newsprint, mats, ink, type metal, etc., were purchased from England, Norway and Germany. Due to the present war we were compelled to look elsewhere, with the result that our supplies today come from the U. S. A. I am sure this is going to give India better printed newspapers, as nowhere has so much advancement been made in the production of newspapers as in America.

High Press Operating Temperatures

To give my readers some conception of the heat here, the daily temperature the

(*Continued on Page 47*)

Equipment and Supplies

(Continued from Page 16)

ton, believed a few months ago that we would be in this present state of metal shortage at this time. Let us, therefore, picture the situation at its possible worst and conserve now every grain of metal in every form down to the sweepings.

"In so far as type metal is concerned, the tin shortage will not prove so serious a problem as many of us have come to believe if we dig out and re-use the stagnant stocks of type metal stored away. There is enough such standing matter in the printing and publishing industry which if remelted, will make a stock-pile sufficient to carry on for years. This standing matter, if sold to peddlers, junkdealers or general smelters, in all probability will pass to other fields for civilian use. I cannot emphasize too strongly that unless this standing matter is returned to the type metal manufacturers for reprocessing, the printing industry will face a serious problem.

"The third question brings up the matter of an alternative alloy. I do not believe an alternative alloy to replace type metal is necessary. Linotype metal casts the cleanest slugs with 4% of tin and 11¾% of antimony. The formula for stereotype metal calls for a low of 5% of tin and 14% of antimony. Monotype metal calls for a low of 6% of tin and 16% of antimony. The tin and antimony content of all these metals can be reduced moderately if necessary. The slugs, plates and type will not cast as clean with the lower tin and antimony content as the faces to which we have become accustomed but *we are at war* and as long as the impressions are legible we will have no reason to complain.

"Boiled down, the solution of the metal problem is in the laps of the printers and publishers themselves. To paraphrase Leon Henderson's characterization that 'Those who run their cars at a speed of more than 40 miles an hour are slackers,' those printers and publishers who do not turn in their stored metal and stagnant standing matter to type metal manufacturers for re-use as type metal are slackers.

Stereotype Equipment and Supplies

PRESIDENT Oscar C. Roesen of Wood Newspaper Machinery Corporation, New York, states: "We are not permitted to manufacture any new Autoplate machinery, but new machinery which we have in stock that is 80% or more completed, we can finish. We also have in stock quite a number of used Autoplates which can be reconditioned and sold."

In answer to the question: "Are repair and replacement parts for your outstanding machines available for prompt shipment?" Mr. Roesen states: "We have made it a practice for years to carry in stock spare parts to be used in case of a breakdown. If a customer requires electrical equipment, this is difficult to obtain as it must be ordered from the outside. An A-10 Rating helps in this case, but, it being at the bottom of the list, deliveries are long and uncertain."

Discussing the policy of the Wood Company respecting customer service, Mr. Roesen states: "We have always felt that a customer who buys machinery from us is entitled to service by the Wood Company. We have considered it an obligation to see that our machinery functions efficiently. We send service men around the country at no charge to the customer to inspect our machinery and to make recommendations for improved operation should they find it necessary.

With respect to the situation during the next six months, Mr. Roesen reports: "Not being a crystal gazer or a swami, I cannot predict. Our 100% war effort must come first and I feel that we all must make sacrifices to accomplish it."

Regarding substitutions, Mr. Roesen feels that since the machinery manufactured by his company is of the precision type, it would be difficult to substitute other materials for those now in use.

Stereo Machine Replacement Parts

General Sales Manager Arthur Dressel of R. Hoe & Company, states: "With respect to stereotype equipment and supplies, our policy for furnishing replacement parts for presses applies equally to replacement parts for all other types of Hoe equipment in the field. We have a limited quantity of stereotype equipment available. While we do not stock regular molding material, we have a fair supply of stereotyping and pressroom tools, accessories and supplies on hand. This is available to the trade on an A-10 rating under Order P-100, wherever such orders can qualify as Repairs, Maintenance or Operating Supplies and bear the specific endorsement required under P-100.

"We have on hand a limited stock of new and used stereotyping equipment. Machinery under manufacture is confined to machines which have been under construction for many months and for which materials have been on hand for some time. Delivery in some cases, particularly with respect to motor-driven machines, is dependent upon whether or not a purchaser is able to extend a preference rating order, either as the result of a PD-1-a application, or on an A-10 rating under P-100 in the event that the material is entitled to such rating since no capitalized equipment may be replaced under P-100.

"It is the policy of our company to extend every possible service consistent with the demands being made upon our facilities for Army Ordnance and other types of war materials. We maintain a separate department for the servicing of equipment in the field with special facilities for expediting the execution of emergency repair orders under existing abnormal conditions. Our salesmen are also devoting a considerable portion of their time to customer service during the present emergency.

"With the increased demands being made upon our machine shop facilities, due to the urgent need of war materials, the ability of manufacturers to fill emergency repair orders will no doubt be further limited and delays will necessarily take place in the securing of critical materials such as bronze castings, steel forgings, bearings, and the like, particularly where foundries and forges are working on orders with priority ratings substantially higher than A-10."

Direct Pressure Presses

Assistant Sales Manager C. S. Davis, jr., of Lake Erie Engineering Corporation, manufacturers of Directomat Hydraulic Matrix Molding Presses and Acraplate Vulcanizing Presses, states his company "can furnish both units at this time, a few of which are going through the plant, but only on priority orders. Under present-day conditions it is impossible to build these units without priority applying. This is particularly true in view of the fact that production of our normal products of metal-working hydraulic presses, etc., is 100% devoted to war work.

"We can, however, furnish repair parts for all of our equipment which are obtainable on the A-10 Rating Under Preference Rating Order P-100. Shipment of such parts is dependent upon their nature and whether or not they are in stock. Shipping time of some parts will range from one week to six weeks.

"Regarding your question about the situation during the next six months, we do not see any change for the six month period from the date of your questionnaire."

With respect to the stereotype scorcher and stereotype supplies situation, President George Clark of American Publishers Supply, Lynn, Mass., reports his company can furnish Form-O-Scorch mat scorchers in all models. Repair parts for the company's machines are available under A-10 Preference Rating on purchase orders. Shipment can be made promptly. Mr. Clark feels that the outlook for the stereotype supplies field within the next six months is very good. At the moment, no substitute or alternative materials are necessary.

Some months ago (November 1941 issue) it was announced that developmental work was being conducted by American Publishers Supply on a fabricated stereotype molding blanket in which no cork was embodied. At that time it was stated production of the blanket was not sufficient to permit domestic consumption.

Dry Mats

Sales Manager W. H. Ingram, jr., of Wood Flong Corporation, stereotype mat manufacturers, states his company is regularly furnishing its products with prompt shipment. He sees no cause for concern during the six-month period from date of our questionnaire.

A dry mat manufacturer states that his company up to the present time has

been able to obtain sufficient pulp, chemicals and other materials needed for the manufacture of stereotype dry mats. It has not been necessary to make use of substitute materials. In some cases, it has been necessary to invoke the A-10 Priority Rating to obtain needed materials.

"It appears almost certain now," he states, "that about May 1 pulp of all kinds will be placed on an allocation basis of some kind, although there has been no announcement from the War Production Board. We believe that on an allocation basis we and other manufacturers will obtain sufficient pulp to enable them to supply customers' mat requirements. The entire paper and pulp shortage situation seems to be clarifying itself and there is every indication that there is nothing serious in this situation."

Stereo Supplies

It is reported by suppliers of stereotype molding materials that shipments of these materials, including cork blankets, are being made promptly to newspaper plants. Shipments are being received in fairly prompt manner from the mill but no information about the future is available other than that "a sufficient supply is on hand."

For the present, it seems that sources of supply for backing felt are good.

While manufacturers and suppliers have been working on alternative materials for use in case the necessity arises, the only substitute mentioned recently is that it may be necessary for the trade to adopt a "paper" pouring sheet or tail board for use in stereotype plate casting boxes in case of a stringency of supply in the present steel boards.

While there has been no shortage of rubber creepers for use in stereotype mat molding combinations, increasing difficulty in securing them is now reported.

The outlook for continued delivery of stereotype supplies (other than mats) during the coming six months seems to be fair.

Newspaper Printing Presses and Supplies

SALES Manager Arthur Dressel of R. Hoe & Company, New York, reports that the manufacture of newspaper presses is practically at a standstill at the present time and new orders cannot be accepted on any basis which would conflict with war work. "We have available," continued Mr. Dressel, "a limited number of used presses with such replacement parts as may be necessary to put the equipment in good operating condition. The furnishing of such replacement parts, however, is dependent upon the situation prevailing at the time of sale as respects whether or not the replacement parts required are available or the replacement parts as may be available in stock.

In answer to the question: "In case of total disability to a customer's press, would you undertake supplying a new press to replace it under A-10 or PD-1-a, delivery of course, being dependent upon production of war materials, which take precedence over civilian needs?" Mr. Dressel replied: "Replacement of a printing press may not be made on an A-10 rating under Order P-100 and while an order could be accepted on a defense rating obtained by a PD-1-a application, it is unlikely that much progress could be made in the manufacture of such equipment unless the rating so granted were comparable with ratings assigned to the vast amount of defense, army ordnance and armament work already in progress, or which might be placed subsequently, and it seems most unlikely that such comparable rating would be granted. In the case of total disability to a customer's press it seems most probable that the only recourse would be to install such used equipment as might be available but WPB would, of course, be the judge as to this."

In discussing substitute of alternative materials, Mr. Dressel said: "In view of the further tightening of priority regulations, and the ever increasing demands being made on the producers of scarce materials, it is highly probable that certain materials normally used in the manufacture of printing press replacement parts will not be available on an A-10 rating and substitutes will have to be found such as the use perhaps of cast-iron for bronze or steel. Items most likely to be affected are all types of bearings, *i.e.*, anti-friction, bronze and white metal, alloy bronzes, steels and parts made of, or containing aluminum. Just when this condition will develop depends largely on the specific items which may be called for in a replacement order and on whether or not the manufacturer may have such materials available in processed or in semi-processed form. In such cases where materials must be secured from the prime supplier delays will obviously result and in many cases materials will probably not be available due either to the inability to secure sufficiently high ratings or because the volume of materials required will not warrant its production by a mill."

Anticipate Service Requirements

In the spirit of cooperating with the urgent requirements for war materials we have asked our customers to anticipate their service requirements by having their machinery inspected at frequent intervals and replacements for worn parts ordered before the time when it might be necessary to put in an emergency call due to a breakdown brought about by anything of a nature that might have been anticipated or prevented. Emergencies when they are handled as such are always a source of definite disturbance to an orderly manufacturing sequence which we are endeavoring to maintain, with the reduced manufacturing facilities for such work now at our disposal, and the reduction of such disturbance is obviously a definite step in getting the most from the comparatively small but important portion of our facilities devoted to service and repair work. Furthermore, the actual replacement before a breakdown in most cases saves other inter-operating parts which are often-times destroyed by a breakdown while machinery is in operation.

Suggests Purchase of Reconditioned Press To Tide Over Emergency

President Oscar C. Roesen of Wood Newspaper Machinery Corporation, New York, informs us that "There is no possibility of our furnishing any new newspaper presses until after the war is over. We are manufacturing material for the defense program, which takes preference over anything in our plant. Since we have no second-hand presses in stock we could not recondition any. If a customer had a second-hand press, bought in the open market, and he wished it reconditioned, we would recommend that he go to the manufacturer of the press for this service.

"In case of total disability of a customer's press, should he obtain a priority of A-10 or better, we could only accept his order and make a delivery contingent upon the other priorities which are ahead of his. An A-10 priority is the lowest in the so-called defense program and should a customer obtain an A-10 priority or less I doubt very much if it would ever be completed as long as the present emergency exists as there are so many priority ratings ahead of A-10 as to preclude us ever working on his machine.

"If anyone has a machine which has served its usefulness I would suggest that he buy a reconditioned one to tide him over until the emergency is ended. Newspapers being in the same category as public utilities it would be undesirable to substitute materials and thereby risk the possibility of a breakdown and miss editions at a time when the daily press is playing so important a part in the defense of our country."

Printing Equipment Drives, Controls and Supplies

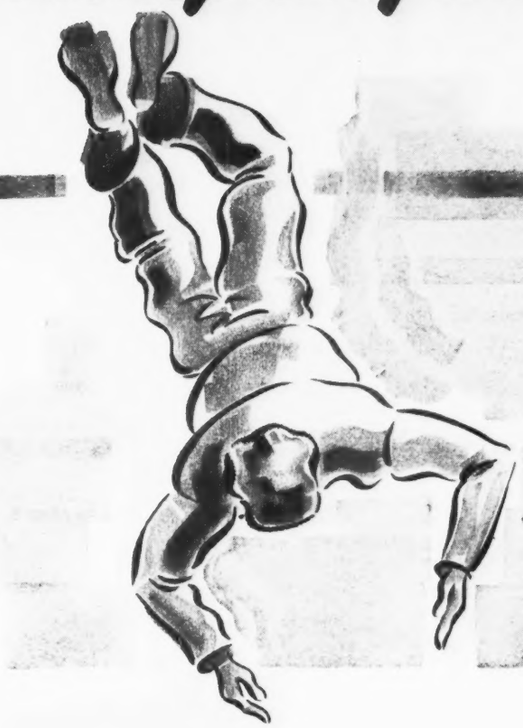
PRINTING press and stereotype drives and controls and conveying systems can be furnished, according to President A. J. Cline, of Cline Electric Company, Chicago. Shipments can be made promptly if the material is in stock. Some used equipment is available. A-10 rating under Preference Rating Order P-100 is required. Power and control equipment for any printing equipment secured by printers can be furnished.

Blankets

Up to the present moment, John W. Foster of Tingue, Brown & Co., manufacturers of newspaper press blankets states his company is able to ship promptly in all of its products. It has not been necessary to introduce substitute or alternative materials in any of the company's products, but his firm is experimenting with a substitute for a synthetic coating for blankets. He does not anticipate any changes in the present situation within the next six months. Undoubtedly, it

(*Continued on Page 48*)

if a handspring will do it...



Hoe is doing everything that's possible to keep your press-room equipment in production. Sometimes it's done by the skillful adaptation of an existing repair part to a different purpose. Sometimes it requires the utilization of some available material for one which is no longer available. You can be sure that if human ingenuity can solve the problem, you will get the parts and the service you need for your present mechanical operations. Since almost all of our facilities are engaged in the manufacture of war materials for our armed forces, you can aid the Victory Program by examining your machinery regularly and anticipating maintenance needs as far ahead as possible.

R. HOE & CO., INC. 910 E. 138th St., at East River, NEW YORK, N. Y.
BOSTON · CHICAGO · SAN FRANCISCO · BIRMINGHAM

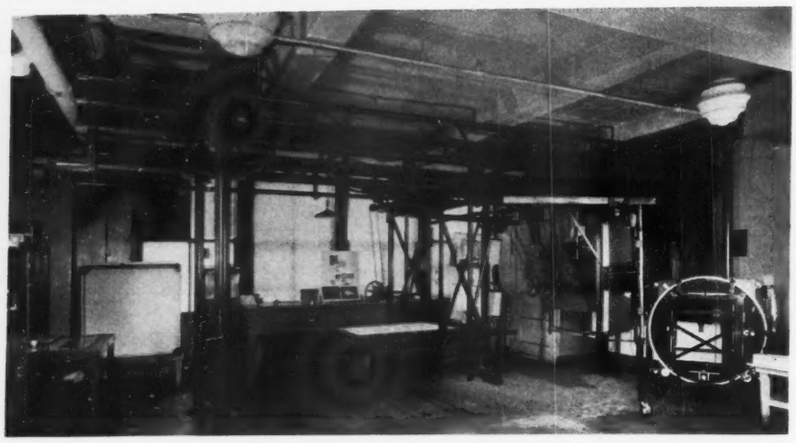


Fig. 1.—Full length view of the camera in plant of Art Photo Engraving Company, Inc., Newark, New Jersey. Maximum step-repeat plate which may be obtained on this camera is 28 in. by 30 in. Also shown are the movable arc light arms, straight-line reverser and the long camera extension possible. This camera is used for making step-repeat plates for the letterpress, offset-lith and gravure processes.

Letterpress Step-Repeat

—How the Art Photo Engraving Company of Newark, N. J., handles this type of work for making Multiple Image Plates

By ADAM HENRI REISER

(PART I)

DUPLICATION of image! A printing plate with more than one image is a natural demand rising from man's search for an easier way to do things and a quicker way to get them done. An outgrowth of this is the desire to get things done more economically. Various ways have been followed to attain this in the Graphic Arts. Without retracing too far, time was when the one-up image of any type served as the printing image surface. As run volume increased, shortcut search began. In lithography and gravure this simply meant producing another stone, press-plate, or cylinder containing more of the original images, their number determined by the size of the sheet to be run. When one color was being printed the problem wasn't at all imposing, for there was no register. However, difficulty was encountered when multi-color work entered the field, for then each color in the multiple-image plate had to register with the others.

Offset-Lith Field

Offset-lithography made noted advances in its adoption of the mechanical means of imposing the subjects. This movement took two paths. While Bassist made use of the vacuum frame — embellishing it with devices to achieve register in stepping-up subjects on the plate—Jones, Boedecker, Huebner, and others were tinkering with the idea of mechanically placing their images on the press plate. All made use of the photo-lith principle of offset-lith. Huebner made the greatest strides, and with the introduction of his machine on a practical scale came the real advance of offset-lith. Directoplate, Rutherford, and others followed closely, all with machinery built specifically for the purpose of mechanically positioning the image on the surface of the press plate.

From this came a natural outgrowth, the production of multiple images on the photographic emulsions. Due to the difference in the light-sensitivity of the photographic emulsions and those of the press plate coatings, different conditions of room lighting are necessitated. That places the composing machine at a disadvantage by forcing its positioning or placement in a room where the light source can be limited to red light, suitable for darkroom work on the photographic emulsions. Thus came the development of the camera back to enable production of step-repeat work on photographic emulsions either on glass or film under darkroom conditions. It is interesting to note that now perfect, absolute register to three decimal places is possible by means of the modern step-repeat camera backs, as well as in the composing machine.

It is worth remembering also, that all composing machines can be used to produce multiple images on photographic emulsions. The Rutherford includes recesses in its backboard or bed which permit glass to be used as a receiving surface while at the same time enabling use of the machine for film or press plate production. Incidentally, these recesses of the Rutherford can also be used to hold engraver's plates, an adapter being supplied so that various sized metal plates can be held in position on the backboard.

The Lanston Monotype Machine Company's M-H Universal Process Machine is used in several offset-lith plants for the production of multiple negatives or positives on either glass or film. Early in 1941, that company announced a model designed especially for use by photo-engravers.[1]

Gravure Field

The above applies to offset-lithography. Only one attempt has come to light of the adoption of the idea of mechanically positioning images for gravure work. William C. Huebner has developed a machine which is said to enable shooting the image in exact register over the face of a cylindrical press unit. Of course, Intaprint, as well as several gravure houses, make use of the conventional photo-composing machine to shoot the image to a flat piece of cop-

[1]See article *Is Step and Repeat Coming To the Aid of the Letterpress Printer?* by Frank M. Sherman, on page 14 of the May 1941 issue of *Printing Equipment Engineer*.

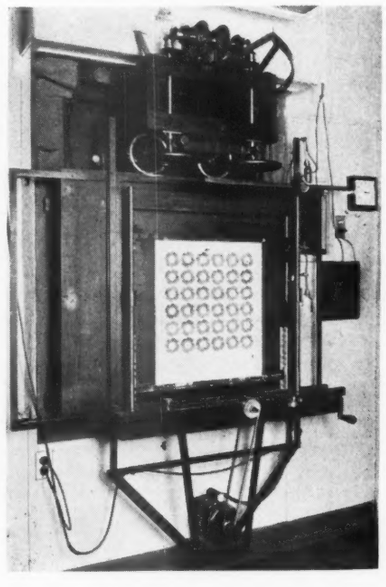


Fig. 2.—This close-up view shows construction of the Art Photo Engraving Company's step-repeat camera back. While not essential to the explanation of the camera for step-repeat plate-making, yet the versatility of the camera is shown when it is stated that the back is holding a glass which has stepped up multiple-image positives for the automobile carburetor filter screen mentioned in this first installment of Mr. Reiser's two-part article.

Keep It Clean!

Cleanliness of machine equipment is the basic requirement of any effective maintenance system. Every good machinist and m-o knows it! Just plain dirt can do more to defeat a careful adjustment or deteriorate a product than any other factor of wear or error. To protect yourself in the future with your present equipment—*keep it clean!*

LINOTYPE

Garamond Bold No. 3 Series

Helpful Maintenance Booklets

Be sure to get your copies of the Linotype Life Extension series—to be had for the asking.

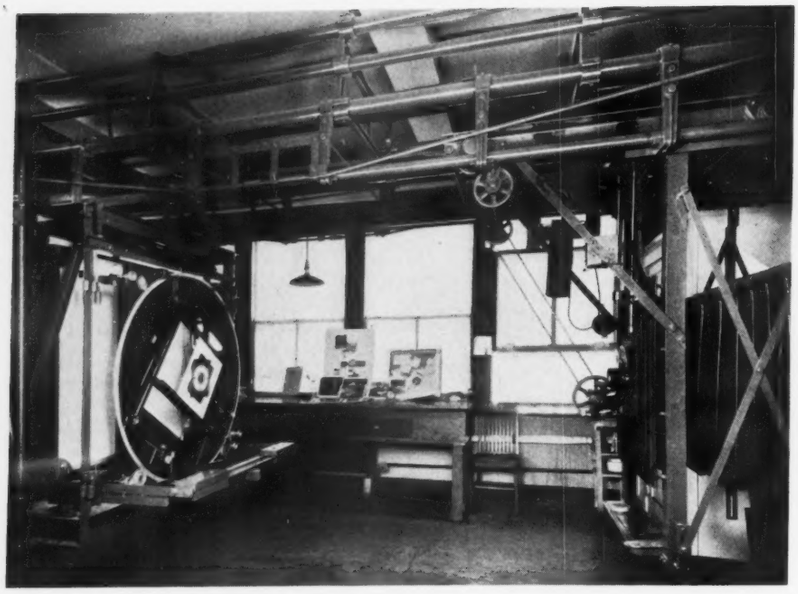


Fig. 3.—View of Art Photo Engraving Company's step-repeat camera, outside the dark room, showing the screen rotating device applied to the positive box.

per. But the first mentioned machine in the gravure field, and it is worthy of repetition, shoots directly to the copper cylinder used in normal rotogravure procedure.

Photo-Engraving Step-Repeat Work

Some evidence exists of the photo-engraving acceptance of step-repeat devices and methods — but not many. A recent report of the successful application of the step-repeat method to photo-engraving was that contained in a talk given by President Ernest Sanger, of the Art Photo Engraving Company, Inc., of Newark, N. J., at the Chicago 1941 Photo-Engravers' Convention.

Let's look in on this modern plant, and share with Mr. Sanger and his associates the knowledge of the method evolved by them in stepping up designs on wet plate using their specially constructed camera. In all, more than three years have been spent by the Art Photo Engraving Co., in producing step-repeat material for letterpress as well as for gravure and offset-lith houses on the step-repeat camera shown in Fig. 1. A gratifying part of the entire picture lies in placing this work outside the pall of cut-throat competition. In some cases there is a reduction in production costs. But in most, the cost of the step-repeat plate exceeds that of the original plate made by the engraver. However, when costs of the electrotypes and costs of assembling and press time preparation are combined, and when in the final analysis the saving in paper is also taken into consideration, the cost of the step-repeat plate by the photo-engraver is far more economical than using electros for multiple images.

Production Costs

Take just one case, and then we'll pass on to the mechanics of production. An estimate on a job that lent itself to step-repeat production ran about $16 higher than the next highest bidder. Salesmanship stressed the saving in press time, makeready time, paper saving, and paper cutting costs. This swung the job to the step-repeat method. Worth repetition is the fact that the higher plate estimate landed the job. Actually, the overall savings exceeded the fondest hopes, for there was no comparison in press time. Where formerly makeready time on such a job took close to three days, this makeready took less than half a day (one hour actually). Add that to the savings in cutting and paper (no extra trims), saving in space between units (space necessary due to the employment of hooks to hold the electrotypes in place with none now needed on this large plate) the economy becomes apparent.

Paper saving is an item that must be stressed, especially at this time when we are working under abnormal conditions. Too, very often the deciding factor in routing a job to either typographic or offset-lith process is the cost of the paper involved. With waste running to 16% as it did on one job, and the subsequent elimination of that entire waste by the use of step-repeat plates, it can readily be seen that this method has placed a mighty weapon in the hands of the photo-engravers.

But the Graphic Arts alone is not the whole oyster to the Art Photo Engraving Company, for the company's step-repeat service has opened a virgin field not related to the printing field. Figure 2 shows a positive stepped up to be used in producing a master plate for filters used in automobile carburetors. Sounds preposterous, doesn't it, yet it's a fact. For the master plate made from this glass is used to produce these copper screens so familiar to automobile users (if you ever lift the hood of your car). Ingeniously plated, produced in a manner similar to electrotypes, the copper screens are uniform in thickness, texture and quality. Any requirement in size of mesh can be met effectively. Mr. Sanger expressed himself as amazed at the horizons opened to himself and his associates through the use of this step-repeat camera.

As can be seen from the illustrations, the camera used at the Art Photo Engraving Company is no ordinary affair. It is a darkroom camera of the overhead type, and embraces suggestions by Charles Beisler, executive of the company who also is a practical photo-engraving photographer with years of varied experience. Mr. Beisler has been instrumental in the development of aquatone, and is particularly well fitted for step-repeat work because of his contact with the photo-composing machine of offset-lith. This influence can be seen in his contributions to the Art Photo Engraving camera which was built especially to the specifications of the company. It still is in a state of flux, improvements being incorporated as the need develops.

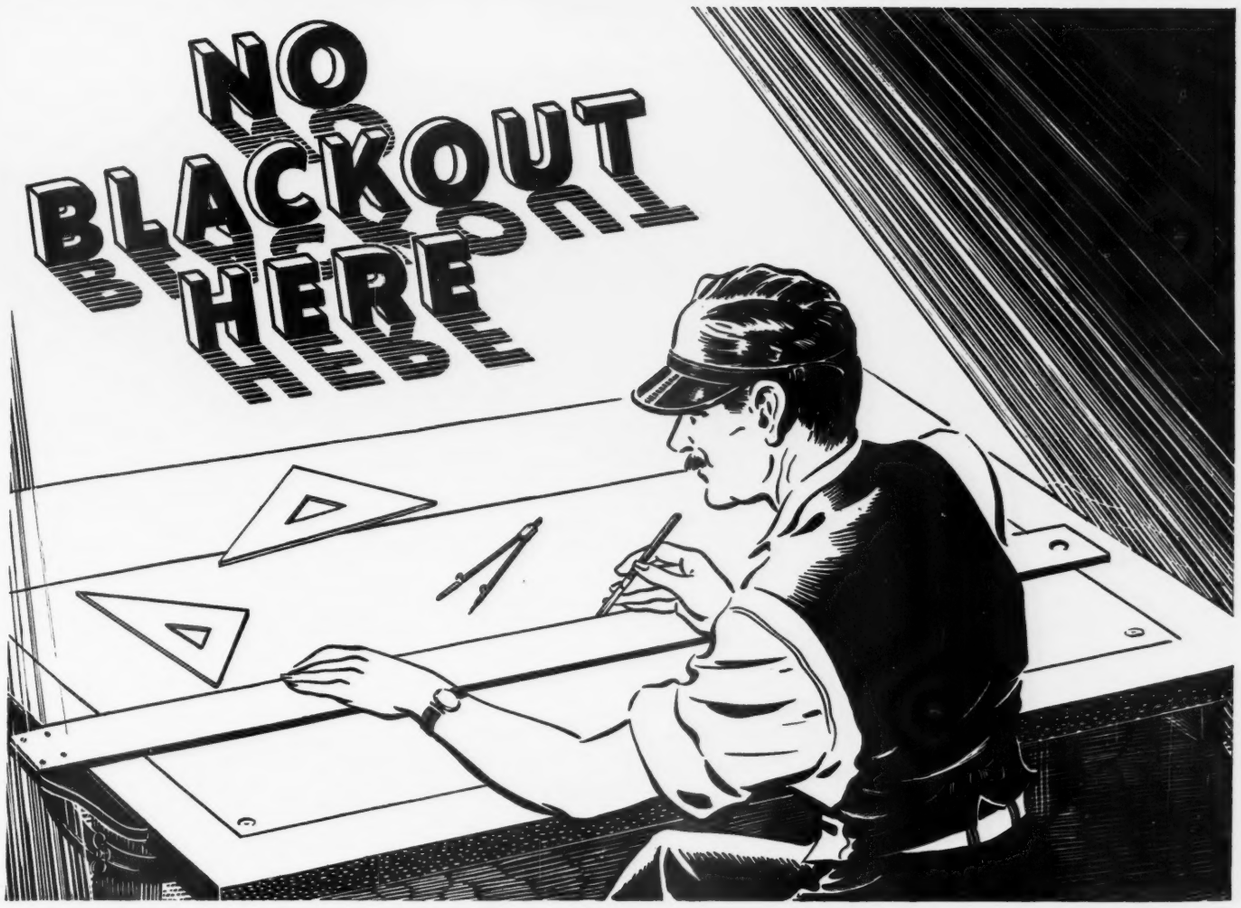
Space in this issue limits further exploration in this step-repeat subject. So far mention has been made of the early and present methods of step-repeat work in the three main fields of printing. It all led up to the Art Photo Engraving Company's camera being built specifically for that purpose with some thoughts on the advantages accrued from the method. Part II will be devoted to a further development of the step-repeat theme with an examination of the camera and the method used in step-repeat work on the camera itself.

(To be concluded)

Offset-Lith Plate Life

IN answer to question submitted before the L.N.A. Convention panel discussion at White Sulphur Springs, West Virginia, May 1941, Dr. Robert F. Reed said:

"As a usual thing, it is not the thinness of an offset-lith plate that determines how long it can be used, but whether or not you can put it on the press time and again without pulling out the edges. We have run plates fifteen times on the press and found that they went down only 0.003 in. in thickness due to regraining. That isn't much. It isn't as much as it seems it ought to be, which means that in graining you are not only removing the metal on the surface, you are pushing it around, but you do create a fresh surface. You are not reducing the thickness of the plate as much as most people think. Even in the case of deep-etch plates I don't think the etching is the controlling factor. It is whether or not the plates will hold at the edges and whether we can hold them in the clamps."



● Through war and peace, depression and prosperity, this man continues to work on new ideas and improvements in Goss printing presses.

At present, his plans may not go beyond the blue print stage, because there's a war to be won. Out in the plant, men and machines are going full blast, building weapons to beat the Axis . . . but here in the engineering department, at least a part of the staff is assigned to the task of developing designs for post-war presses.

For more than half a century, the Goss engineering department has been working toward the future, always in advance of existing methods and mechanical principles.

Because it has faith in America . . . because it knows that this nation will survive the war and come back stronger than ever before — the Goss engineering department will continue to look ahead!

We proudly fly the Bureau of Ordnance flag and the U. S. Navy "E" pennant, emblem of excellence in producing naval ordnance.

THE GOSS PRINTING PRESS CO., 1535 S. PAULINA ST., CHICAGO

NEW YORK: 220 E. FORTY-SECOND ST.

SAN FRANCISCO: 407 CALL BUILDING

LONDON, ENGLAND: GOSS PRINTING PRESS CO., Ltd.

GOSS

EXECUTIVE ¶s

Production Manager Leon A. Link has been named chief production specialist of the Newspaper Section of the Printing and Publishing Branch of the War Production Board of which George A. Renard is Chief. Chief of the section is M. M. Donosky of the Dallas (Tex.) *Morning News*. In addition to Mr. Link, the other member is Lyle McFetridge of the Tulsa (Okla.) *World-Tribune*, who is in charge of circulation. Main objectives of Mr. Link's activities will be co-ordination and co-operation of the mechanical departments of newspaper plants; conservation of materials, and working on the possibility that something might be done in a manufacturing way which might be useful in war production.

Energetic Donald Rein, who until recently has been Executive Vice President of the United Typothetae of America, is now sales manager for Uniform Printing and Supply Div. of Courier-Citizen Company. Plants are maintained in Chicago and Brooklyn. The firm does a manufacturing stationer and insurance

Donald Rein is now Sales Manager for Uniform Printing and Supply Div. of Courier Citizen Company.

supplies business. In speaking of Mr. Rein's departure from the U.T.A., President Otis H. Johnson paid him the following high tribute: "Fortunately, he (Mr. Rein) has left a well trained staff so that the work of the National association may continue without interruption." Mr. Rein expressed "considerable satisfaction in again being in and a part of the printing industry."

William M. Passano, treasurer of the Waverly Press, Baltimore, has been named Chief of the Commercial Relief Printing Section of WPB. He is a graduate of Johns Hopkins University School of Engineering and is a member of the American Society of Mechanical Engineers. He has contributed to the trade press, several articles on printing plant technical subjects having appeared in *Printing Equipment Engineer*.

David J. Winton has been named Chief of the Pulp and Paper Branch of WPB, succeeding Norbert A. McKenna, resigned. Mr. Winton, who is 44, is vice president of the Winton Lumber Company, Minneapolis. He was a Tank Corps lieutenant in World War I, was wounded in the Argonne, received the DSC, and was graduated from Princeton in 1920.

Joe Skach, formerly associated in the production department of the Rosenow Company, Chicago, is now production manager of D. F. Keller Company, printers and lithographers, Chicago. In telling about his new connection with

Joe Skach is announced as production manager for Chicago's D. F. Keller Company.

the Keller Company, a line portrait of Mr. Skach appeared on the first page of the four-page french-fold announcement. It is reproduced here about ⅓ size. Mr. Skach is secretary of the Chicago Craftsmen's Club.

Many executive readers of *Printing Equipment Engineer* will be pleased to learn that Charles J. Hentschell has been made production manager of the St. Louis *Post-Dispatch*. While Mr. Hentschell has been associated with the *Post-Dispatch* for some months, as a member of the production department, it was not until just recently that he was formally given the title of production manager. Previous to his present connection, Mr. Hentschell was mechanical superintendent of the St. Paul (Minn.) *Dispatch-Pioneer Press*, a new plant for which had just been completed when he assumed his new duties with the St. Louis plant.

Fred Glen Small, 50, owner of the New York advertising agency of that name, died at his home in Rockville Centre, N. Y., Tuesday morning, March 24, after a brief illness. In August, 1929, he organized an advertising agency with offices in New York, handling the following accounts: Cameron Machine Company; C. B. Cottrell & Sons Co.; General Ceramics Company; H. H. Heinrich, Inc.; William C. Herrick Ink Co., Inc.; Intertype Corporation; Matrix Contrast Corporation; New Era Manufacturing Company; Vulcan Proofing Company; and Wood Newspaper Machinery Corporation. Mr. Small is survived by his wife, Helen B. Small, and two sons, Richard, 19, a sophomore at Duke University, and Robert, 14.

Fred Glen Small, Printing Equipment Advertising Specialist, passed away in March.

Oliver L. Edes of the Edes Mfg. Co., and chairman of the Plymouth (Mass.) Rationing Board, rides to work on a bicycle to conserve auto tires.

Chairman Abstracts 600 Articles

R. Randolph Karch, Chairman of the Research Commission of the International Association of Printing House Craftsmen, during 1941 abstracted 647 of the major articles appearing in about 60 American trade journals for *Share Your Knowledge Review*. Carbon copies of the work, bound for reference, make a book 9 in. by 11 in. by 3 in.

In addition to his abstracting work Karch also indexes all items for the "Index to Graphic Arts Periodical Literature," which appears as a supplement to *Share Your Knowledge Review*.

Other activities, aside from his job as principal of Printing High School in Cincinnati are five regular monthly columns in as many American printing and educational journals.

Forty-two articles appearing during 1941 in *Printing Equipment Engineer* are both abstracted and indexed by the Research Commission, of which Mr. Karch is the sole member.

Waive Per Capita Tax

At the mid-year Board Meeting of the International Association of Printing House Craftsmen, held in New York, on March 28, President Frank McCaffrey reported on the unanimous decision of the Board of Governors to waive the per capita tax on members of affiliated Clubs serving in the armed forces.

Also at this meeting, purchase was authorized of both Canadian and American Defense Bonds.

OLD presses ought to be fighting, as they now may, instead of standing around drawing only dust and pensions in costly upkeep. No more "Slacker" presses necessary. They can now be scrapped profitably and their vitally needed metal used for tanks, guns, battleships, munitions, and other armament.

Scrap the "slacker" presses

under the new

WAR-TIME MILLER SCRAP ALLOWANCE PLAN

TO any reputable concern who *by previous arrangement* with us shall scrap any standard cylinder press — two options are offered under the War-Time Miller Scrap Allowance Plan.

OPTION 1. — We are prepared to issue a credit certificate, good until two years after the end of the present war, and in an amount two times that of the used machine's scrap value, the printing concern to keep the actual cash money received for the scrap thus actually receiving three times the scrap value of the old press.

OR

OPTION 2. — We will issue a credit certificate, good until two years after the end of the present war, but in an amount three times that of the used machine's scrap value, provided the cash amount received for the scrap is immediately forwarded to us for conversion into United States Savings Bonds and Stamps which we will have issued and delivered promptly to the printing concern. Thus, the printing concern will actually receive four times the scrap value of the old press.

No immediate new Miller purchase need be contracted for, and even if the credit certificate holder chooses to never use it for such new equipment purchase, the holder will have lost nothing as he will have received the actual scrap value of the discarded equipment in cash or United States Bonds and Stamps. Full particulars on the new War-Time Miller Scrap Allowance Plan will be gladly given on request, or may be obtained in many instances by a telephone call or letter to your local printing trades association.

Miller Printing Machinery Co.
Pittsburgh, Pa.

miller

PRESS PACKING *in prepared form at Waverly Press, Baltimore, together with maintenance of close tolerances in printing element height conserves press makeready time*

By ROBERT ROY*

*The Waverly Press, Baltimore, Md.

ADJUSTMENT of press packing thickness to increase or reduce cylinder impression has been eliminated at the Waverly Press, Inc., Baltimore, by standardization of packing for various kinds and thicknesses of paper. Tympan paper 0.006 in. thick and under-packing in two thicknesses, 0.004 in. and 0.002 in., have been selected carefully for accuracy and, with one "sheet of its own", constitute the changeable part of the cylinder packing.

When preparing work for the press, the press planner refers to a chart for the thickness of the paper to be printed or measures a sample in a direct reading Ames Gauge kept on his desk. Knowledge of the thickness and surface of the paper to be printed enables the planner to obtain the correct packing from a table prepared for this purpose. This information conveyed to the pressman by specifying on job instruction (Fig. 1) how many sheets of 0.004 in. under-packing are required and whether a sheet of 0.002 in. is needed in addition to the top sheet and "sheet of its own."

When issuing instructions for very heavy or very light forms, the press planner occasionally will add or subtract 0.002 in. from the tabulated packing because of these factors. One "sheet of its own" is all that is ever carried, because the maintenance of close tolerances on the height of all material sent to press has resulted in the elimination of most makeready. Many forms require no spotup; none require more than one sheet.

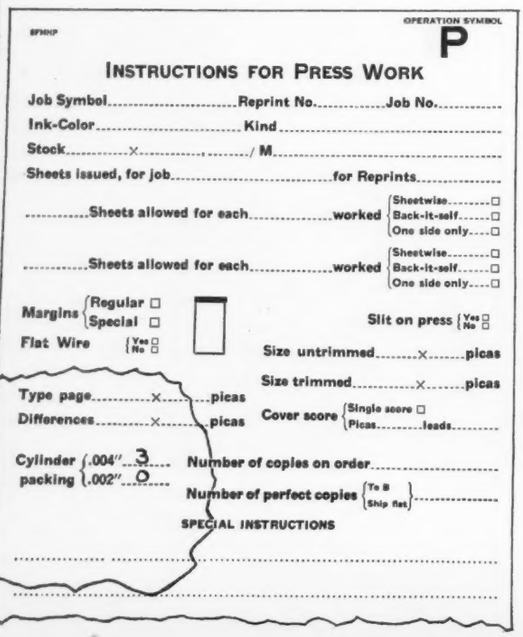


Fig. 1—Section of Instructions for Press Work *form used in plant of Waverly Press, Inc., Baltimore. Pertinent to this little article are the encircled lines giving specifications about the press underpacking for the particular press upon which the job is to be printed. In this instance, the under-packing consists of 3 sheets of 0.004 in. stock.*

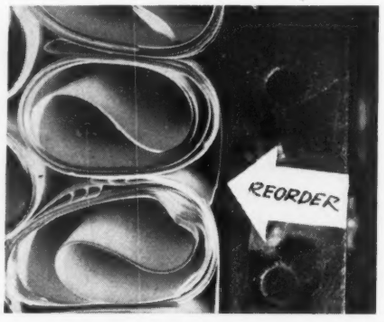


Fig. 3—Close up view of section of press underpacking storage in plant of Waverly Press, Baltimore, showing Re-order Arrow. When the storage of preprepared packing in each compartment has been reduced to three rows, the compartment is refilled so there will always be a plentiful supply at hand.

Recently, while new time standards were being set, it was suggested that the predetermination of press packing could be supplemented by its advance preparation as well, and this idea has been carried out with a resultant saving of press time of about 4 min. per form.

Top sheets are cut to size and trimmed on the corners of the edge to be reeled, then are folded and rolled and a narrow paper loop is slipped over each sheet to keep it rolled. Under-packing sheets are prepared in the same way in combinations of two 0.004 in. sheets and three 0.004 in. sheets. These combinations enable the pressman to vary his underpacking by increments of 0.004 in. from the minimum of 0.008 in. The thinner 0.002 in. stock is too flimsy to prepare in this way and is cut from a roll and folded by the pressman when needed.

Storage space for rolls of prepared packing has been constructed of standard steel shelving material (Fig. 2) placed near the elevator which carries forms to and from the stones. When returning from the elevator, the pressman will pull out the rolls specified on the job instruction, carry them with him, and replace the old packing simply by breaking the paper loop, pinning and clamping the folded edge, and reeling the top sheet.

To prevent the supply of prepared rolls from becoming exhausted, re-order points have been established by means of small arrows affixed to each compartment in the storage space (Fig. 3). When the level of rolls contained in any compartment falls below the arrow, the compartments in the entire cabinet are refilled. Similar re-order points have been established in sheet storage to allow time for purchase and delivery.

Since the average press run at Waverly Press is short, a large number of forms are handled and many packing changes are necessary. The reduction in makeready time effected by this method has resulted in worthwhile economies.

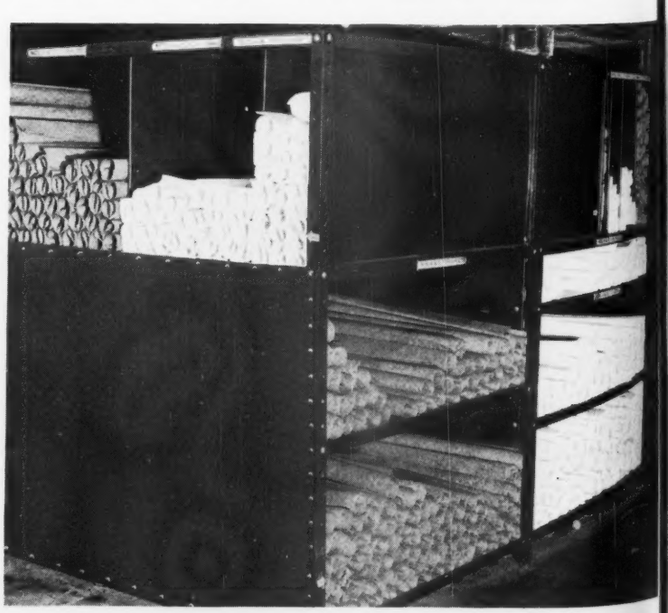


Fig. 2 — Predetermination of press packing includes advance packing preparation. Resultant saving in press time is about 4 min. per form. In the two lower left-hand and the upper left-hand compartments are carried the top sheets. In the other compartments are carried under - packing sheets made up in combinations to enable the pressman to vary his under - packing by increments of 0.004 in. from the minimum of 0.008 in.

EQUIPMENT

Recent Linotype Installations

One or more Linotypes have been installed by the Denver (Colo.) *Register;* Western Newspaper Union, Chicago; Center Point (Iowa) *Independent;* William R. McGowan, Chicago; Leadville (Colo.) *Herald-Democrat;* Neodesha (Kan.) *News;* Brownwood (Texas) *Bulletin;* Owensboro (Ky.) *Messenger* and the *Inquirer; Hartford Gazette,* Bel Air, Md.; Franklin (N.H.) *Journal-Transcript;* Gospel Trumpet Company, Anderson, Ind.; *Renville County Farmer,* Mohall, N. D.; Brush-Moore Newspapers, Inc., Canton, Ohio; Povall Printing Company, Lexington, Miss.; Airport Publishers, Inc., Buffalo, N. Y.; Bristol (Conn.) *Press;* Two Rivers (Wis.) *Reporter;* San Antonio *Express* and the *News;* Colorado Springs *News;* San Jose State College, San Jose, Calif.; Mercury Press, San Francisco; Graphic Press, Baltimore; Uniform Printing and Supply, Chicago; *Waechter-Anzeiger,* Cleveland; Seymour (Ind.) *Daily Tribune;* Ulysses (Kan.) *News;* St. Clair (Mo.) *Chronicle; La Liberte,* Winnipeg, Man.; Linotype Composing Company, Toronto.

Keeping ipi in Touch

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION • MARCH 30, 1942

WPB INK ORDER WELL RECEIVED

Limitations No Threat to Printing; Available Colors Meet Needs

As this issue of "Keeping in Touch" went to press, the War Production Board had just issued two orders governing the use of scarce materials in printing inks (March 30). At the same time, the Board said this action indicated its intention to "assist the printing and publishing industry in so far as possible."

The first order limited the use of chrome yellows and oranges, chrome greens, molybdate orange, orange mineral and organic pigments to 70 per cent of 1941 consumption. (This is not a restriction on ink use, but on ink manufacturing.) Oil soluble toners, such as methyl violet, can no longer be used in news black or other black ink, and the use of organic toners, such as alkali blue, is restricted to 8 per cent of the weight of a black. Phenolic and glycerol-phthalate resins in gloss inks are ruled out by the restrictive order.

High Preference Rating

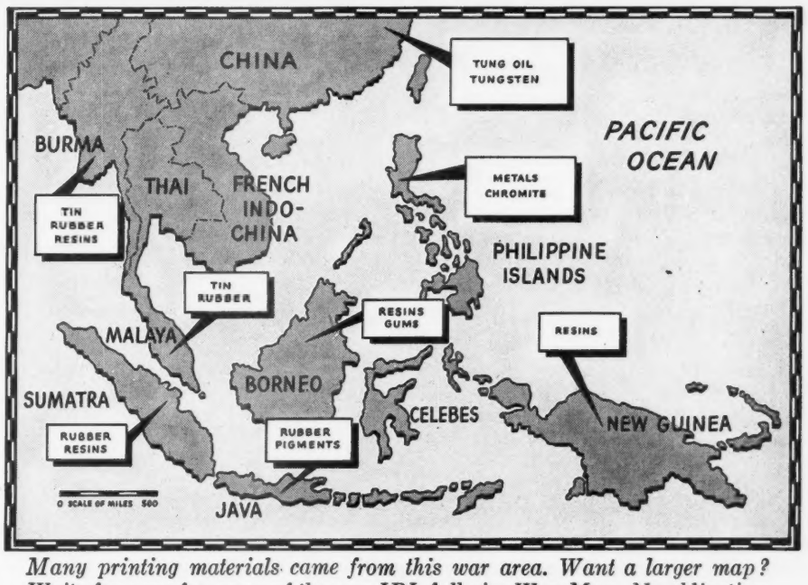
However, in keeping with its avowed purpose to help printers where possible, the Board in another order assigned the comparatively high preference rating of A-5 to enable ink manufacturers to acquire these important materials.

The war in the Far East, shipping shortages and other war factors have for some time made it difficult for the ink maker to obtain many supplies formerly considered essential. This has really created problems for the ink manufacturer, rather than for the printer, publisher or advertiser, because it is a fact that up until now, there has been no serious shortage of colored or black inks. It still seems probable that printers are going to continue to get ink in sufficient quantities and in nearly all colors.

New Challenge to Chemist

The ingenuity of IPI's ink chemists is taxed as never before, but they are meeting this new challenge with their background of past investigations of raw material sources and the expanded research facilities now available to them.

Several products formerly used in ink manufacturing are now cut off as a direct result of Far Eastern hostilities. These include chromite for chrome yellow and chrome green (from the Philippines); natural resins (East Indies, Malay, India); tung oil and tungsten.



Many printing materials came from this war area. Want a larger map? Write for your free copy of the new IPI full-size War Map. No obligation. International Printing Ink, 75 Varick Street, New York City, New York.

The entry of the United States into actual hostilities speeded up the war program in general and has made necessary further reductions in the supply of materials available for non-military uses. This situation is affecting the manufacture of printing inks.

Color Shortages

Cadmium colors—reds and yellows—are much more difficult to obtain. These colors are used in comparatively small quantities in display and billboard advertising because of their light resistant properties, and in packaging, for acid or alkaline resistance.

Other reds and blues, most of which come from organic materials, are now limited as organic compounds of many kinds are required for defense purposes.

Methyl violet, used to "tone" black inks and to produce most purples, is made from the same material as an important propellant. The W. P. B. order now prohibits its use as a toner.

Phenolic and glycerol-phthalate resins, used in making gloss inks and many of the "specialty" inks, are vital to the war effort. These resins are ruled out. They are used in small quantities for ink and are replacable.

Toluol, an extremely important ingredient for rotogravure and for fast drying letterpress inks, is one of the "T's" in "TNT" (trinitrotoluol).

The most important white pigment, titanium dioxide, is vital to war production. Its substitutes, such as zinc white, are equally critical.

What about the more cheerful side of the picture? There are several ink "staples" which so far have not been seriously affected. Carbon black is available in large quantities. So are linseed oil and petroleum derivative oils. Rosin, an American product, with some development, could be an alternate for Far Eastern resins.

Furthermore, unremitting research by IPI laboratory technicians is producing new ways to formulate inks out of materials not required for war. More than ever, research is helping to maintain the art of printing, one of the safeguards of democracy.

Research Offers Hope

Under the stimulus of a war economy, research often finds that the "essential" material can be replaced by a new material which does the job better. Already in this war, certain "indispensable" ink ingredients have turned out to be not so indispensable after all. New formulations, alternate materials have actually improved on the former products, no longer available because they are required for war purposes. Lines of raw materials are being simplified, and many were unnecessarily extensive. Nevertheless, so far, printers have not been seriously affected.

Advertisement

The Printing Metals Situation

METALS required for the printing industry are becoming progressively critical. The copper shortage is real, therefore look for WPB to make a check in the printing industry for excessive inventories.

The latest tin order, M-43-a as Amended, prohibits the use of new tin in type metal manufacture; likewise, it limits the use of tin to a maximum of 12% in type metal and limits the total amount of tin used for that purpose to the amount used in the corresponding period of 1940.

This drastic tin order is another reason why stagnant metals within the printing industry should be unfrozen and sold to type metal manufacturers.

Aluminum: Under mandatory control.

Antimony: All of it now goes into Government pool for allocation.

Copper: Claim is made that not enough is yet available to meet U. S. military demands and Lend-Lease commitments. Look for further restrictions on use. *Consider substitutes now.*

Lead: Printing industry cut to 90% of 1940 consumption. The demand is heavier as more critical metals are curtailed.

Nickel: Canada is the only source. It is up to maximum production. For printer needs consult your last supplier for procedure.

Tin: Uses drastically curtailed. No new tin is allowed for type metal, hence manufacturers are dependent upon scrap tin-bearing metals alone.

Zinc: Non-defense needs on priority still being met, although control by WPB is tightening.

Nonferrous Metals—Smelter Quotations—March 28, 1942

(100 lb. Lots)

	Feb. 27	*Mar. 28*
Aluminum (94%) minimum, del.	$13.50	$13.50
Antimony (Am., 224 to 9999 lb., N. Y. + $2.14 per case of 224 lb. freight Laredo, Tex.)	15.25	15.25
*Copper (Electrolytic, Conn. Valley, deld.)	12.00	12.00
Lead (E. St. Louis pig)	6.35	6.35
Nickel (99.9% electrolytic cathodes) f.o.b. refinery	35.00	35.00
*Tin (Straits, spot)	52.00	52.00
*Zinc (prime West., spot, E. St. Louis)	8.25	8.25

*Trading suspended.

These quotations furnished by *Daily Metal Trade*, Cleveland.

With Your Help We Shall Be Victorious

By C. C. LITTLE, ScD.*

*Managing Director of the American Society for the Control of Cancer.

THE real existence of the greatest national emergency in our history is now recognized by every intelligent American citizen. Along with the vast demands made upon our courage and patience by this situation is a keener realization of our responsibilities to care for the lives and happiness of those unfortunate people who find themselves in personal physical adversity.

The greatest of all these menaces to the health, happiness and life of our people is cancer. The quality of its threat and of its power as a killer is unique. War itself may take a larger toll of Americans in the years to come. Various heart conditions of cardiac disease may do the same thing. Neither, however, will so silently, so grimly, and with such evil power to disintegrate moral stamina, invade the lives and families of our people. We must not lose sight of this fact. No matter what our emergency obligations may be, we must not forget this great continuing enemy of mankind.

Fear, ignorance, and delay are the three allies of cancer which lead to disaster and death. They can be overcome by knowledge of the early signs and symptoms of the disease and of the methods of fighting it. The American Society for the Control of Cancer throughout the country for years has been engaged in this battle. It is making progress. It must not lose the gains made, and indeed must drive ahead. The defeat of fear, ignorance, and delay lies in the adoption of an intelligent and controlled point of view by each individual. These same qualities will contribute to his or her success in fighting whatever the national emergency may present.

The fight against cancer is an ally in the fight against our foreign enemies. The methods are much the same. The qualities appealed to in the individual are similar. The complete victory spoken of by the President in discussing the international situation is just as applicable to our fight against cancer. Both victories can be gained. We must recognize how closely they may be related to one another and must act speedily, courageously, and untiringly to make both possible.

Ink Conservation Order for Printing Ink Makers

PRINTING Ink Conservation Order M-53 issued by WPB on April 1, provides that manufacturers of printing inks for sale to others or for their own consumption (not including the Government Printing Office or the Bureau of Engraving and Printing) may not accept deliveries of a quantity of any one of the following materials in excess of 70% of one quarter of their use and consumption of such one material in 1941: Chrome yellows and oranges, molybdate orange, chrome green, orange mineral, any one class of organic pigment, nor accept delivery of a quantity of any iron blue in excess of 100% of one quarter of use and consumption of such material in 1941. Use of these materials is restricted to the same percentage as deliveries are restricted.

Restrictions on Use contained within Printing Ink Conservation Order M-53 also provide that in the manufacture of printing ink no producer shall use any oil soluble toner in any black ink, nor a toner of any form in news ink; use any alkali blue or other organic toner as a toner for black ink in excess of 8% by weight, of such black ink where such alkali blue or other organic toner is in paste form or, where in the form of dry color, then in excess of 4% by weight of such black ink; use any glycerol phthalate resins or phenolic resins for the production of any gloss ink, non-scratch ink or gloss overprint varnish.

A recent WPB Order assigned the high preference rating of A-5 to permit ink makers to obtain materials limited by Printing Ink Conservation Order M-53.

Benefit Book Auction

On Saturday, May 16, the New York Club of Printing House Craftsmen will conduct a book auction at 4 o'clock at the Downtown Athletic Club in New York, N. Y. The auction will be held at the afternoon session of the Craftsmen's Second District Conference.

The books that will be offered at this auction are from the libraries of the late International Craftsmen's Secretary Louis M. Augustine and the late Stephen H. Horgan, inventor of the halftone and a writer for many years to the trade press on the subject of photo-engraving.

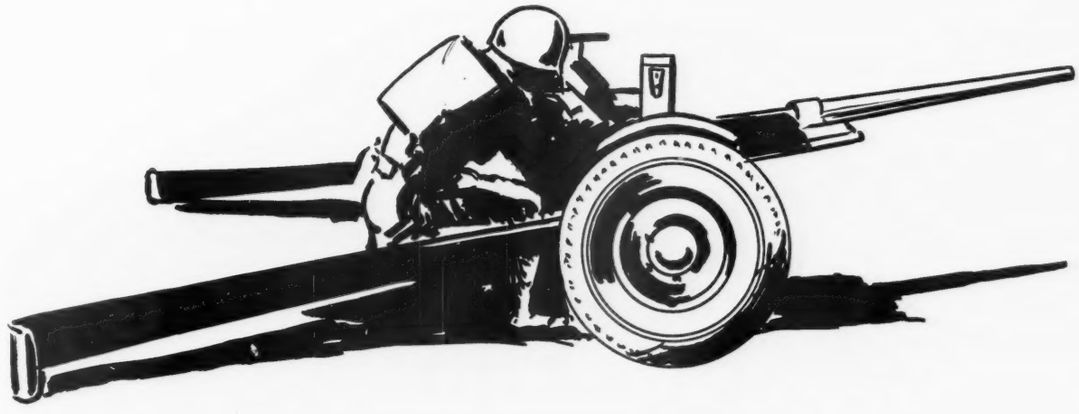
Full proceeds of the sale of the books will be turned over to the widows of the men mentioned above. Total offerings will be 110 books from the two libraries.

A 16 page catalog in which minimum prices have been placed on each book has been prepared, and will be sent to all interested in purchasing. Bids will be accepted in advance of the auction by mail from anyone unable to attend in person. All books from Mr. Horgan's library will contain his private book plate. In addition, William Goudy is preparing a book plate that will be placed in each volume sold at the auction. The plate will indicate from which library the book was obtained and also that it was purchased at this auction.

"VICTORY PLEA"

Protect and Safeguard Your Press and Stereotype Equipment so that All Manufacturers May Utilize

EVERY AVAILABLE HOUR for PRODUCING WAR MATERIELS



Around the Clock Production on

Ordnance Material — Machine Tool Components — Weldments

THE DUPLEX PRINTING PRESS COMPANY

BATTLE CREEK, MICHIGAN

ALL TYPES NEWSPAPER PRESS AND STEREOTYPE EQUIPMENT

Here the Photomat synthetic plastic plate is run on a Webendorfer Little Chief, 15½ in. by 20½ in., offset press. It is handled the same as are metal plates—Photomat in proper size fits into the grippers of any lithographic press. William G. Mullen (above left), chief chemist, and Joseph E. Gilligan, general manager of Lithomat Corporation, look over a sample of 250 screen halftone printing. The mat is furnished in all sizes for all types of offset presses up to 52 in. wide.

Synthetic Plastic Non-Metallic

Plates for printing by offset-lith process now announced as being ready for large-sale production — Furnished for any press up to 52 in. width

OFFICIALS of Lithomat Corporation have announced completion of large scale production facilities for two plastic synthetic lithographic non-metallic mats for use in place of zinc and aluminum plates. The new plastic mats are called Lithomat and Photomat. Lithomat is a direct-image offset mat, upon which the printing design can be drawn, written, printed or typewritten. Photomat is a photo-offset mat from which can be produced halftones up to 250 line screen, small type faces and fine illustrations.

Sponsors state the mat may be secured in all sizes for all types of offset-lith presses up to 52 in. wide.

Lithomat, the direct-image mat, is available in most all sizes for all types of machines, including Rotaprint, Multilith, Webendorfer, Harris, Davidson and others. Photomat is furnished in all required sizes for the commercial lithographic industry.

Development of the synthetic lithographic mat is attributed to Joseph Gilligan with the cooperation of several research laboratories. The manufacturing development stage in which laboratory formulae and practices were tested, modified and improved under actual conditions of manufacture, was carried out under supervision of Chief Chemist William G. Mullen of the Corporation.

Manufacturers state Photomat can be handled without fear of spoilage by light, up to the time it is sensitized—sensitizing is accomplished by immersion in a bath solution and then dried. The original copy is photographed, the negative placed over the plate in a vacuum frame and exposed for the required time before carbon arc lamps. The mat is then rubbed up with a special developing ink called "Developit", and afterwards washed out in water to remove the developing ink except where it remains in the image or exposed portion of the mat which later attracts the printing ink. From here on the standard procedure as used in albumen coated metal plates is followed.

Advantages claimed for Photomat include elimination of counter-etching and the plate graining operation, as well as coating, whirling, mixing of albumen, dissolving of ammonium dichromate, and straining, because the mat is already coated.

In the case of Lithomat, typewriting, Vari-typing, sketching and other art work is done directly on the mat. After the sketch, typewriting, or other image is made on it. Procedure here also follows standard lithographic practice.

Some of the advantages claimed by the manufacturer for Lithomat include: The plate is light, long-wearing and is as easy to handle as a sheet of index bristol. Lithomat is flexible and will take original drawings with pen, pencil, brush, litho crayon and air brush. Tracings can be made directly on the surface of the mat, and all types of forms may be proofed on Lithomat and direct typewriting and hand transfers can be placed on this synthetic plastic mat by the same method as when using zinc or aluminum plates.

Intertype Annual Report

Early in March, President Neal Dow Becker of Intertype Corporation submitted his annual report to stockholders for the year ended December 31, 1941. After setting up reserves for depreciation and taxes, there is a profit of $465,003.26. From that amount $100,000 has been set aside to provide for abnormal future losses which may result from wartime or post-war conditions. The remaining profit of $365,003.26 is equivalent to $1.65 a share on the 227,740 shares of common capital stock outstanding.

"The incidence of the war," states Mr. Becker, "of course, is having a profound effect upon the Corporation's activities. The export business, which in normal times was about 40% of the total business has practically been eliminated except as to South America, and is far below normal for that continent. In the domestic market we were able to satisfy the requirements of our customers during 1941, both as to typesetting machines and as to parts and supplies. . . ."

"As to the future in the domestic business, it seems probable that we shall be able to continue to furnish parts and supplies to newspapers and printers, since the policy of the Government presently appears to be to grant priority ratings on metals sufficient to keep existing printing machinery in operation. There appears to be no assurance, however, that we shall be able indefinitely to supply new typesetting machinery except that required by the Army and Navy or other departments of the government.

To indicate the Corporation's participation in war work, Mr. Becker states in part: "Since we have an engineering staff of high quality backed by skillful workmen and by machine tool equipment of modern design, and since we are normally accustomed to precision work, our services for certain armament manufacture have been much in demand."

Chicago Plant To Be Moved

On May 1, the Chicago manufacturing plant, laboratories and offices of J. M. Huber, Inc., will be moved to 1230 Jackson Blvd. In the new plant, 20,000 sq. ft. of floor space will be available. Ralph C. Persons is manager of the Mid-west District for J. M. Huber, Inc.

The Kid Finds Another Way Of

Numbering for Profit

- "Every time you number another Defense Bond among your possessions, you have profited—all America has profited—the World profits."

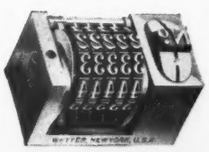
  ★ "You're right Pop—every time a numbering job is done with a Wetter, it's Numbering for Profit."

- "Still know why?"

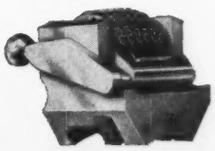
  ★ "Sure do—and most people who use numbering machines do too. The Wetter Frame is machined from a solid block of steel—frame can't bend or twist—wheel shaft and wheels keep in positive alignment—plungers can't wear loose and wobble."

- "Fine! And never forget—a Wetter lasts so long you forget the price."

  ★ "Right again Pop. Just like a Defense Bond—as soon as you buy it the profits begin."



Wetter Lock-Wheel
One of many models



Wetter Rotary
One of many models

WETTER NUMBERING MACHINE CO.
ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.
Sold by all dealers and branches
AMERICAN TYPE FOUNDERS

-2327

LET'S PUT ON A

TELEPHONE CAMPAIGN

UNQUESTIONABLY every engraving plant, electrotype plant, printer, and newspaper has some idle or obsolete printing metals. Many engravings, electrotypes, or stereotypes will never be used again. We suggest a telephone campaign to secure the release of this dormant metal. Have someone in your organization call up the owners, get their permission to put these metals back into circulation. You'll be surprised how many of your customers, realizing the shortage of printing metals, will cooperate with you. Ship this dormant and scrap metal back to us. Remember — you can get new metal, cash, or credit for your dormant or scrap metal. Act now! Don't wait!

Note—All copper and brass is resold by us to licensed smelters.

IMPERIAL TYPE METAL CO.

PHILADELPHIA NEW YORK CHICAGO

Imperial

Serving the Printing Industry Only

National Emergency Dictates Simplification of Paper Lines

Gilbert DISPATCH Bond and Gilbert AVALANCHE Bond

now to be known only as

GILBERT BOND

25% Cotton-Fibre-Content

This is an announcement we planned to make almost a year ago. The growing demand for GILBERT watermarked quality paper, representative of this famous fifty-year-old name, made the announcement imperative.

But, the economies and restrictions of Defense did not make the new GILBERT paper announcement feasible. Now, actual wartime necessity dictates that paper lines be simplified . . . materials and labor be conserved . . . excessive operations be eliminated. That's why, as soon as present stocks of DISPATCH, AVALANCHE and ENTRY papers are exhausted, you will be supplied with GILBERT Bond and GILBERT Ledger.

As originally planned last year, the new GILBERT watermarked papers would be the best of their types that materials and skill could produce. *Today, they still will be the finest in their class . . . the finest 25% cotton-fibre-content papers that wartime restrictions will permit!*

Gilbert DISPATCH Ledger and Gilbert ENTRY Ledger

now to be known only as

GILBERT LEDGER

25% Cotton-Fibre-Content

Concentration upon GILBERT watermarked papers in our 25% cotton-fibre-content line will permit better productive facilities . . . better efficiency in deliveries to you through simplification of stocks.

The GILBERT Bond line will be available in white and the permitted color range, with an attractive cockle finish. A laid finish will be available in white and ivory. Envelopes to match in entire line. The GILBERT Ledger line will be available in white and buff, and six colors for machine posting. Your Gilbert paper merchant will be glad to give you any further information desired regarding GILBERT Bond and GILBERT Ledger. Gilbert Paper Company, Menasha, Wisconsin.

GILBERT *Quality Papers*

* * *

The Scanner

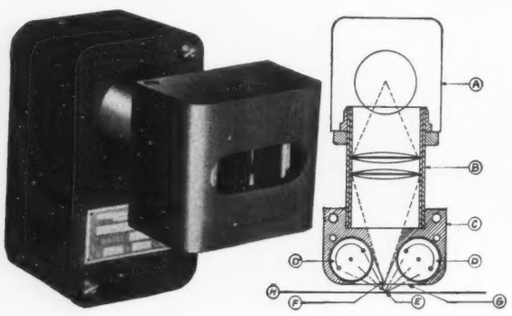
United Cinephone Corporation recently announced a new product called the Scanner. It consists of a light source and two photo-tubes in a housing ready for attachment to any sensitive photo-electric amplifying system.

Some typical applications of the Scanner are as follows: Registration control from marks imprinted on materials such as cellophane, light or heavy opaque papers, cloth or metals; sensitive cutoff from contrasting colors on similar materials; operation through glass from a meter pointer for underload or overload alarm; counting watt hour meter revolutions; tape reading or repeating on automatic tape machines; control according to perforations punched or marked on automatic business machine cards; for paper cutting or box folding, and other uses not immediately related to the printing industry.

It is used wherever photo-electric control is desired from a reflecting surface 2 in. or less distant from the unit. In operation (see the accompanying diagram), light from the bulb mounted in metal housing (A) passes through the double converging lens in lens barrel (B), then through aperture (F). A highly concentrated spot of light strikes the surface being scanned (H) and is reflected back into the photo-tubes, its intensity being dependent upon the reflective quality of the scanned material. Thus, a registration mark on moving paper, or the travel of a meter pointer into the spot of light concentration will cause a change in the illumination reaching photo-tubes D and D^1. The response of the photo-tubes to this change in reflected light intensity is transmitted through co-axial cable to a remote amplifier, making possible the control of auxiliary electrical devices.

The Scanner, manufacturer states, eliminates the need for separate photo-tube and light source assemblies. Casing (C) measures 2½ in. by 2½ in. by 1½ in., and casing (A) is 3½ in. by 2¼ in. by 2¼ in. for mounting in restricted spaces. The lens system is claimed to be highly efficient, and requires no adjustments. The unit is sufficiently flexible to operate in conjunction with any standard, sensitive amplifier, although an amplifier specifically designed for this service (United Cinephone Model 66S) is available.

Literature is available on the Scanner.



Outside view of United Cinephone's Scanner, together with plan view diagram of component parts. This device is applicable to several operations in the printing industry.

Copper Conservation Order Interpreted

The Printing and Publishing Industry is permitted limited use of bronze powder, ink, paste and leaf for the two months ending May 30, after which its use will be banned by WPB, according to an interpretation of Copper Order M-9-c, appearing in the press under date of March 30. Use of copper derivatives in printing and publishing would have been barred after March 31, but because of confusion as to application, postponement for 60 days from that date has been ordered. Printers and publishers were required to file before April 20 a statement of inventory as of March 31 and the amount used during 1941. Other uses of copper and copper products not deemed decorative are still under general items of the copper order which limit the use in any quarter to approx. 70% of the amount used during the last quarter of 1940.

PRINTING PATENTS REPORT

Covering Patents Issued February 24, March 3, March 10, March 17, March 24

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Binding, Cutting, Perforating:

2,273,824. APPARATUS FOR ATTACHING PLASTIC BINDERS to stacks of sheets to form assembled books, notebooks, magazines, etc. The binder, made from a thermo-plastic material such as pyroxylin, comprises a continuous back portion from which a number of parallel fingers extend. The perforated paper sheets are stacked in one section of the machine and the binder in another, and an automatic aligning mechanism inserts the finger-like portions of the binder through the apertures of the sheets. At the same time a novel curling mechanism heats the finger portions of the binder and shapes them into loops to form circular binders which retain their shapes upon cooling. Invented by Harold G. Barrett, Chicago, Ill. Assigned to Plastic Binding Corp., Chicago, Ill. Application December 19, 1939. 19 claims.

2,277,265. METHOD OF TREATING LEAVES so that they may be more readily assembled and bound together, wherein the leaf assembly may be finally secured together through the application of a flexible and elastic adhesive applied to the edges of the assembled leaves. To achieve a superior bond between the adhesive and the individual leaves, the edges of the leaves are first processed by removing a portion of each leaf on one face along the edge in such a manner that the fiber along the thinned edge is loosened. Thus, a more secure bond can be obtained between the adhesive and the leaf edge due to the raising of the fibers at the binding point. Invented by Logan F. Zahniser, Erie, Pa. Assigned to Erie Foundry Co., Erie, Pa. Application January 10, 1940. 10 claims.

2,277,266. MACHINE FOR TREATING LEAVES so that they may be readily assembled and bound together in making books. In order that a good bond may be achieved between the binding adhesive and the individual leaves of the assembly, the machine removes a portion of each leaf on one face along the edge in a manner that loosens the fiber along the thinned edge. This allows penetration of the adhesive directly into the paper stock and provides a better bond. Invented by Logan F. Zahniser, Erie, Pa. Assigned to Erie Foundry Co., Erie, Pa. Application February 9, 1940. 11 claims.

2,277,318. METHOD OF BOOKBINDING wherein the necessity for sewing or kerfing the leaves is eliminated, and a novel binding with spaced leaves is provided of the type used for scrapbooks or where bulky inserts may be later inserted. This is accomplished by forming a binding wherein the leaves are provided at the bound edge with a reinforcement and separating strip which is secured to the leaf edge by a flexible adhesive strip in such a manner that the adhesive strip also serves as a hinge connecting two of the leaves. Invented by Joseph E. Grant, Beverly Hills, Calif. Unassigned. Application March 14, 1941. 2 claims.

Composing Room Equipment:

2,277,360. HAND PRESS, SUCH AS IS USED BY PRINTERS, boxmakers and others, in bending strips of thin sheet metal rule into various shapes. The press has a special attachment which can be applied quickly and used to bend small intricate shapes not otherwise practicable with such presses. This attachment, when in place in the press, will not take up any of the regular working space nor interfere with the throw of the hand operated toggle linkage or other mechanism used in applying power to the die carried by the movable die holder. Invented by Frank Wagner, Chicago, Ill. Assigned to J. F. Helmold & Bro., Chicago, Ill. Application January 11, 1939. 3 claims.

Feeding, Folding, Delivery:

2,273,899. SHEET-DELIVERY AND STACKING MACHINE for printing presses, which operates upon the sheets individually, delivering them to desired points and stacking them there in neat piles. The apparatus comprises a number of pile-supporting mechanisms provided with conveyors, by means of which sheets delivered successively from the press may be discharged onto a selected pile under the control of the operator. By means of the invention, it is possible to build up piles in any desired order by distributing the sheets among the several piles, without stopping delivery. This method eliminates the necessity of stopping the press to remove a pile of delivered sheets and also helps to prevent offset. Invented by Joseph Sinkovitz and John Kuns, both of Pittsburgh, Pa. Assigned to Miller Printing Machinery Co., Pittsburgh, Pa. Application April 2, 1938. 14 claims.

2,274,713. JOGGING MACHINE for straightening sheets in a stack. The principal object of the invention is to provide guide or abutment posts with an improved means for preventing deflection of the edges of the sheets. Each post includes a channel, the front corner edges of which are preferably bevelled and the rear edges of the post flanges rounded, to avoid cutting a sheathing material placed thereover. The bevels terminate above the lower edges of the posts to provide flat faces which are clamped to the sides of the table by fastening devices. The posts are provided with notches adapted to slide over fastening knobs on the side of the table to permit easy removal and application. Sleeved over each post is a tubular sheath of crimped material, such as rubber, having a roughened exterior surface, whereby the portions of the sheath extending across the face of the webs and engageable with the sheets present non-continuous slightly irregular projecting surfaces. This provides necessary friction for resisting upward or downward movement of the sheet edges when the table is vibrated. Invented by William H. Kushera, New York, N. Y. Assigned to Fred M. Brackett, Topeka, Kans. Application December 14, 1940. 10 claims.

2,274,797. IMPROVED VALVE MECHANISM FOR INTERRUPTING AND REESTABLISHING SUCTION in the suction feed members of pneumatic sheet feeding devices, particularly those for automatic press units. Invented by Eneval Kluge, St. Paul, Minn. Assigned to Brandtjen & Kluge, Inc., St. Paul, Minn. Application August 4, 1941. 6 claims.

2,275,688. JOGGING APPARATUS for printing press work. A feature of the invention is mechanism for moving the jogging elements back and forth along diagonal or angular lines instead of straight out from the pile at right angles and back again, as has been the practice. By the adoption of the angular movement it is possible to use a novel and simplified mechanism and also limit the space which is occupied by the mechanism to a much reduced area. Invented by Paul H. Schulz, Moline, Ill. Unassigned. Application April 17, 1940. 10 claims.

2,276,269. SHEET DELIVERY MECHANISM for printing presses of the vertical type, such as those wherein the

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impression cylinder reciprocates in a vertical path and wherein the printed sheets are conveyed from the impression cylinder to a sheet receiving table by means of reciprocating grippers. The delivery mechanism of the present invention enables high speed delivery (i.e. over 3600 sheets per hour) by having the delivery grippers actuated and controlled by an improved cam motion which makes possible a slow approach of the delivery grippers to take a printed sheet from the impression cylinder, followed by an accelerated velocity of the grippers and thereafter a retarding of the grippers at the delivery end so that a sheet may be deposited onto the pile table with a minimum of velocity. Invented by Edward F. Dudley, Oak Park, Ill. Assigned to Miehle Printing Press & Mfg. Co., Chicago, Ill. Application September 9, 1940. 14 claims.

2,277,511. JOGGING MACHINE, having a vibratory table mounted on its supporting frame so that the vibrations are not transmitted through the frame to the building structure in which the machine is housed. Mechanical connections in the machine between the actuator and the jogging table are constructed to give silent operation and to reduce objectionable transmission of vibrating force. The present jogging table is particularly adapted for jogging light weight stock such as india manifold tissues, carbon and onion skin papers, etc., without frilling or curling the papers and is capable of simultaneously jogging a plurality of sheets. Invented by Dietrich Daneke, Topeka, Kans. Assigned to Fred M. Brackett, Topeka, Kans. Application April 27, 1940. 14 claims.

Miscellaneous:

2,274,447. CATALYTIC CONVERSION OF UREA-FORMALDEHYDE RESINS into a type which may be used as pigment carriers for printing on fabric and paper. The process consists of adding a preformed accelerator, comprising an acid alkyl phosphate, to the acid convertible urea-formaldehyde resin. Invented by Theodore S. Hodgins, Royal Oak, Mich. and Almon G. Hovey, Birmingham, Mich. Assigned to Reichhold Chemicals, Inc., Detroit, Mich. Original Application September 13, 1939. Divided and this application February 17, 1940. 10 claims.

2,274,544. PRINTING PASTE AND METHOD OF PRINTING TEXTILES, wherein water solubilized derivatives of insoluble dyes are used as the dye-stuff ingredient of the printing pastes, the solubilizing groups being acyl groups of a kind which can be hydrolized off by chemical reagents after the dyestuff derivative is applied to the fabric. The insoluble dye is thereby regenerated and an insoluble dyeing produced. Example: Cotton cloth was printed with a paste having the following composition by weight: The product of the action of benzoic-acid-m-sulphon-chloride upon the azo dye obtained by coupling diazotized 2-amino-4-chloro-diphenyl-ether to the aniline of 2-hydroxy 3-naphthoic acid — 6 parts; 2 nitro-2-ethyl-propane-1, 3-diol — 18 parts; Water — 20 parts; Starch tragacanth thickening — 50 parts; 20% tri-sodium-phosphate solution — 6 parts. A red print was obtained which has better strength and brilliance than a print obtained in the same way from a similar paste which contained no assistant. Invented by Ivan Gubelmann, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application September 13, 1940. 9 claims.

2,275,008. PROCESS FOR INSOLUBILIZING WATER SOLUBLE POLYAMIDES and for raising their melting point. Products are useful in the application of insoluble films in lithography. The effect is accomplished by incorporating in the water soluble linear polyamides, preferably in the form of film and filaments, an insolubilizing agent such as formaldehyde or similarly acting substances and then heating the polyamide containing the agent to effect water insolubilization. Invented by Donald D. Coffman, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application September 25, 1939. 11 claims.

2,275,101. HOT MELT PRINTING INK, capable of melting below the boiling point of water, comprising a pigment, sulphur and a plasticizer therefor consisting of a synthetic resin made by the interaction of sulphur monochloride and cresylic acid, and a modifying agent. One advantage of such an ink is that it may be removed from paper by macerating the paper in boiling water, the pulp being employed again as paper stock. Example: Carbon black—20 parts; Sulphur plasticized with sulphur resin—100 parts; Beeswax—3 parts. Invented by Carleton Ellis, deceased, Montclair, N. J. Assigned to Ellis Laboratories, Inc., Corporation of New Jersey. Application November 16, 1938. 3 claims.

2,275,991. TEXTILE PRINTING PASTE in which a large variety of coloring materials may be used without the necessity of organic solvents. The composition is prepared by dissolving a pale resinous material in water with a finely divided pigment and a thickening agent. Example: Parts by weight. Gum karaya paste (6%) — 65; 40% aqueous emulsion of a linseed oil modified alkyd resin — 30; Dry pigment — 5. Invented by Donald H. Powers, Moorestown, N. J. and Sivert N. Glarum, Ardmore, Pa. Assigned to Rohm & Haas Co., Philadelphia, Pa. Application May 28, 1938. 8 claims.

2,276,175. PROCESS OF IMPROVING COPPER PHTHALOCYANINE PIGMENTS so that they will not inhibit the action of drying oils when mixed therewith for use in printing and lithographic inks, etc. This is accomplished by subjecting the pigment to a mild oxidation treatment by treating the acid pasted pigment with a small amount of an aqueous solution of sodium hypochlorite at a temperature of about 60° C. When used in lithographic inks, the improved pigment does not retard the drying of the lithographic varnish, which would cause smear. Invented by Maurice H. Fleysher and James Ogilvie, both of Buffalo, N. Y. Assigned to Allied Chemical & Dye Corp., New York, N. Y. Application April 7, 1939. 10 claims.

2,276,387. METHOD OF PRINTING A DESIGN ON A WAX COATED RUBBER HYDROCHLORIDE WRAPPER by initially decorating the wax coated surface with an intaglio deposited ink composed of chlorinated rubber dissolved in tuluol, by means of an intaglio printing unit. Thereafter, the decorated web is formed into a container and the material is subjected to heat sufficiently high to provide an amalgamation of the ink and wax coating without causing the ink to run or offset or causing the wrapper to be deformed. Invented by Irving Gurwick, Mt. Vernon, Ohio. Assigned to Shellmar Products Co., Mt. Vernon, Ohio. Application July 3, 1940. 3 claims.

2,276,704. THICKENING AGENT FOR PASTES for textile printing. Example: 100 grams of Indanthrene Brilliant Green B paste, finely concentrated is made into a paste with 900 grams of a 10-15% aqueous solution of a wood glycolic acid ether prepared according to British specification No. 508,547, and the resulting paste is printed onto a fabric of cotton or artificial silk. After printing, the dry fabric is led through a bath of caustic soda and hydrosulphite, steamed, rinsed, treated with a boiling soap solution, again rinsed and dried. A vivid green shade of good fastness to washing, light, and rubbing is thus obtained. Invented by Alwin Schneevoigt and Julius Beck, Ludwigshafen on the Rhine, Germany. Assigned to General Aniline & Film Corp., New York, N. Y. Application October 4, 1939. 4 claims.

2,276,860. PROCESS OF PREPARING DYESTUFFS of the phthalocyanine series which includes the use of halogenating agents such as phosgene, phosphorous pentachloride, etc. By treatment with halogenating agents there is effected in almost every case a displacement of the shade of color of the dyestuff towards green. The dyestuffs of the present invention may be incorporated as pigments or used for the preparation of printing inks, printing varnishes, etc. Invented by Georg Niemann, Willi Schmidt, Fritz Muehlbauer and Georg Wiest, Ludwigshafen on the Rhine, Germany. Assigned to General Aniline & Film Corp., New York, N. Y. Application December 10, 1936. 7 claims.

2,276,918. PROCESS OF PREPARING NEW DYESTUFFS OF THE PHTHALOCYANINE SERIES which can be converted into color lakes by neutralization by means of earth alkali metals such as calcium or barium. Such color lakes are suitable for the preparation of graphic prints. Invented by Berthold Bienert, Leverkusen-Wiesdorf and Hermann Thielert, Cologne-Merheim, Germany. Assigned to General Aniline & Film Corp., New York, N. Y. Application June 30, 1939. 5 claims.

2,277,169. METHOD OF MAKING FLUORESCENT PRINTED REPRODUCTIONS which will accurately portray the true form, color and expression of an original sketch, by the process of printing paper with mechanical plates having fluorescent inks so arranged that when the completed print is viewed in filtered ultra-violet light, it will have the above characteristics. The steps in the process, in one instance, are: (1) Manually duplicating the

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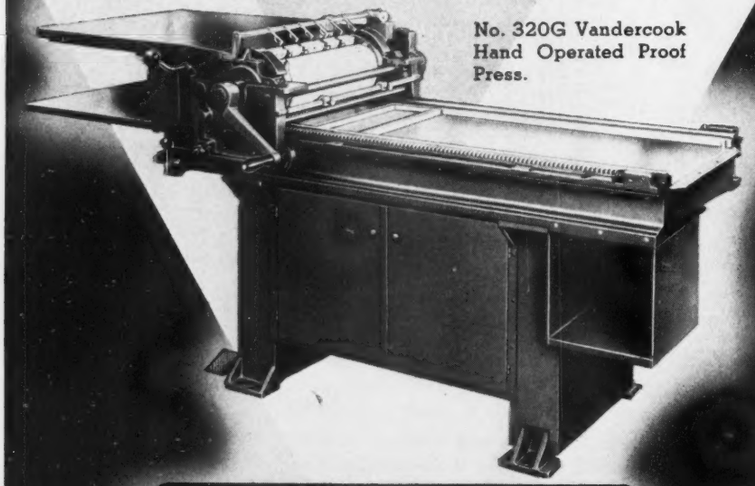

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original sketch with fluorescent water or oil colors; (2) Flooding the fluorescent sketch in a darkened room with a filtered ultra-violet light; (3) Interposing a screen for the making of the printing plate; (4) Photographing the fluorescence of the sketch, using screens to expose the separate colors; (5) Making mechanical printing plates by exposing sensitized plates to the photographs; (6) Applying fluorescent inks similar in colors to the sketch to the plates; (7) Printing; (8) Reproducing the paper under ultra-violet light. Invented by Joseph L. Switzer and Robert C. Switzer, Cleveland, Ohio. Unassigned. Application August 2, 1938. 24 claims.

Plate Making:

2,275,218. APPARATUS AND METHOD OF FORMING FLEXIBLE ENGRAVED PRINTING PLATES which may be substituted for the customary cast stereotype printing plates. The plate of the present invention is formed of a flexible thin zinc sheet which is bent around the exterior of a cylindrical dummy plate provided with longitudinal gaps so that the flexible printing plate can be mounted on the dummy plate with the ends of the plates secured to the side walls of the gaps. The combined thickness of the zinc plate and the dummy plate equals that of the usual stereotype plate. The invention also provides a machine for assembling the plate, comprising a fixed drum to support the dummy plate and a pressure roll to roll the zinc plate on the dummy plate. Invented by George W. Chambers, Tucson, Ariz. Assigned to The Duplex Printing Press Co., Battle Creek, Mich. Application August 14, 1940. 5 claims.

2,275,422. METHOD OF MAKING INTAGLIO PRINTING PLATES without an electrotype. The invention provides a novel substance which is applied as a design to a surface, from which an impression is made in the plate. Substances used are water soluble silicates such as sodium silicate or potassium silicates, which have the characteristic of rising and becoming relatively rigid under heat. These materials are not fusible with the molten metal used in casting the plate. The design is written on a surface with the metallic silicate and the molten metal is poured over it, so that upon hardening, the metal retains the impression of the design. Invented by George de Verry, Springfield, Mass. Unassigned. Application December 20, 1938. 3 claims.

2,276,012. PORTABLE MACHINE FOR BENDING AND MOUNTING engraved printing plates of thin sheet zinc on a cylindrical dummy plate, thus forming a composite printing plate equal in thickness to the usual stereotype cast printing plate, and which may be substituted therefor. The machine comprises a fixed drum for supporting the dummy plate, with a presser roll member mounted thereon. The dummy plate is mounted on the drum and as the presser roll revolves, the printing plate is rolled around the dummy plate. The printing plate is then fastened to the dummy plate by securing screws from the bent ends of the printing plate through gaps in the dummy plate. Invented y James L. Blackley, Battle Creek, Mich. Assigned to Duplex Printing Press Co., Battle Creek, Mich. Application August 14, 1940. 18 claims.

2,276,594. METHOD OF GRAINING AN ALUMINUM OR ZINC SHEET to form a planographic printing surface with a long wearing life, the process also enabling as much variation in the type of grain surface as is necessary. This is accomplished by progressively moving the sheet material over two differently sized drums, subjecting the sheet to bombardment with abrasive granular material to raise parallel peaks while it passes over the smaller drum and then subjecting the grain raised by this bombardment to another bombardment with blunt or non-abrasive material as the sheet passes over the larger drum. Thus, the peaks are bent into overhanging spaced relation to the sheet. The size of the graining can be varied by using differently sized abrasives. Invented by George S. Rowell, Cleveland, Ohio. Assigned to George T. Trundle as trustee, Cleveland, Ohio. Application November 17, 1939. 28 claims.

To Executive Readers

The editor of *Printing Equipment Engineer* invites you to submit descriptions of production and mechanical helps devised in your plant. Our readers will appreciate hearing about something that will be of help to them.

Printing Presses and Equipment:

2,274,166. BLADE ADJUSTING MECHANISM for printing presses of the type wherein a blade is utilized to regulate the amount of ink supplied to the roller, the adjusting mechanism being constructed so that the flow of ink may be controlled remotely from the blade itself. The mechanism comprises a key, which when turned in one direction, compresses a bellows, forcing air or gas in a tube to expand another bellows, thereby causing a pin to push against and flex the free portion of the blade, thereby reducing the space between the blade and the roll and reducing the amount of ink passing the blade to the distributor roll. A reverse movement of the key permits the passage of more ink. Invented by Oscar C. Roesen, Scarsdale, N. Y. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application February 1, 1940. 2 claims.

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2,274,167. HIGH SPEED PRINTING PRESS, such as a newspaper press, having an improved device for collecting the ink mist created by the rapidly rotating ink distributing mechanism. This device comprises a guard member adjacent the ink distributing mechanism, having on its inner side a roll of absorbent material such as blotter paper for collecting the ink mist. Invented by Oscar C. Roesen, Scarsdale, N. Y. Assigned to Wood Newspaper Machinery Corp., Plainfield, N. J. Application April 12, 1941. 13 claims.

2,274,796. IMPROVED MOUNTINGS FOR INKING ROLLERS, so constructed that the inner races of the roller bearings are deprived of rotational movement on the roller shafts and the truck rolls are secured against endwise movement of the shaft. Other improvements permit ready removal of the roller bearings and truck rolls from the roller shafts for replacement of the rolls or for other purposes, such as the transfer of bearings and truck rolls to the shafts of other inking rollers. Invented by Eneval Kluge, St. Paul, Minn. Assigned to Brandtjen & Kluge, Inc., St. Paul, Minn. Application July 5, 1941. 5 claims.

2,275,062. METHOD OF PRINTING BANK NOTES and the like in multiple color at one operation to produce bands or stripes for underlying tints. In the process, intaglio, etched or other undersurface printing plates may be used on either rotary or flat bed presses. Colored bands are formed by laying one or more spaced bands of ink of the same or different colors onto the plate and subsequently superimposing another color or colors of ink to the cuts or depressions not already filled by the first bands of colors. The plates are wiped and polished to remove all surface ink and impression may then be made in multiple color with true matching of the several colors in the same operation. Invented by Myron A. Lathey, Ottawa, Canada. Unassigned. Application March 19, 1941. 3 claims.

2,275,514. MEANS FOR ELIMINATING THE ACCUMULATION OF PRINTING INK at the ends of the inking rollers and preventing consequent seepage of it into the journal bearings. Ink is prevented from spreading to the ends of the roller by use of an ink obstructing member, such as a ring arranged at each end of the roller. In the adjacent roller, a recess is provided into which the ring in the first roller extends, thereby sealing the ends of the roller against leakage of ink at the point where the rollers meet. The main purpose of the invention is to obstruct lateral spreading of the ink at the ends of the roller and to avoid any accumulation of ink by carrying it

around to a point where it is removed and directed back into the ink well. The close fit between the ring and recess will be maintained irrespective of expansion or contraction of the rollers due to changes in temperature. Invented by Edward F. Dudley, Oak Park, Ill. Assigned to The Miehle Printing Press & Mfg. Co., Chicago, Ill. Application May 8, 1939. 7 claims.

2,273,521. METHOD OF DRYING TYPOGRAPHIC OR LITHOGRAPHIC PRINTING INKS which contain solvents substantially non-volatile at ordinary room temperatures but which evaporate rapidly at elevated temperatures. Example: An ink of the following composition is printed on a web of paper. Dry ½ second RS. nitrocellulose — 22.5 parts (by weight); Butyl carbiton acetate — 67.5 parts; Gas carbon black — 10.0 parts. The printed web is then passed through a spray of 80% ethyl alcohol and directly afterwards into a combustion unit where the alcohol is ignited, thus causing evaporation of the solvent of the ink. Invented by Albert E. Gessler, New York, N. Y. Assigned to Interchemical Corp., New York, N. Y. Application July 26, 1940. 4 claims.

2,275,578. ANTI-OFFSETTING TREATMENT in which the printed surface is free from objectionable granular or waxy "feel" and from staining or visible change in the paper. It has been found that cold water-soluble polyvinyl alcohol is effective in preventing offset of ink from one sheet to another, the sheets having been printed by any usual procedure. Sprayed upon the printed sheets, the fine mist distributes minute portions of the composition over the printed surface, and evaporation takes place rapidly enough that the sheets stacked upon each other do not adhere. A small amount of urea or dextrose or an alcohol soluble carbohydrate incorporated in the composition affords a uniform dispersion of the colloid over a period of time and also results in somewhat better bonding to the surface of the sheet. Invented by William H. Wood, Bedford, Ohio. Assigned to Harris-Seybold-Potter Co., Cleveland, Ohio. Application May 3, 1938. 11 claims.

2,275,764. PLATE CLIPS FOR PRINTING PLATE CLAMPING MECHANISM, in which each clip body is slidable in a clip slot formed in the plate cylinder and is cut away so that this portion is disposed below the peripheral surface of the printing cylinder. The cut away portion of the clip body is provided with radially movable blocks which interfit with the guide grooves or members of the clip slot to slide with the clip body within the clip slot, but which are supported against radial movement by the clip slide guides and the cylinder. The block is located so as to support that portion of the printing plate which overlies the clip slot so that relative radial movement of a portion of the clip body does not lift the printing plate from the supporting surface of the printing cylinder. Invented by William F. Huck, Richmond Hill, N. Y. Assigned to R. Hoe & Co., New York, N. Y. Application October 15, 1940. 10 claims.

2,276,113. FABRIC PRINTING MACHINE wherein a flexible stencil of cylindrical form, constructed preferably of silk, is combined with a novel printing cylinder carrying a base cloth which distributes the ink over the printing cylinder. The printing cylinder is so constructed as to maintain the stencil under proper tension to produce clearly printed designs on the fabric. Invented by Howard J. Strauss, New York, N. Y. Unassigned. Application December 26, 1940. 4 claims.

2,276,181. PROCESS AND APPARATUS FOR FLOCK PRINTING OF DESIGNS on woven or knitted textile fabrics, which enables continuous printing of cut-out designs in such a manner that the design may be readily cut out of the fabric along the printed lines without the necessity of trimming the edges. An adhesive imprinting solution is made to penetrate through a perforated stencil before the stencil contacts a fabric to be printed. The stencil has a large number of fine openings arranged to form a design. The fabric is pressed while in contact with the stencil, after substantial penetration has taken place to cause the printing fluid to flush from the openings onto the fabric to form the design thereon. Invented by Hallet J. Foster, Providence, R. I. Assigned to Velveray Corporation of American, Inc., Corporation of N. Y. Application June 30, 1939. 6 claims.

2,276,465. REGISTERING MECHANISM FOR ANGULARLY ADJUSTING FORM CYLINDERS in a multicolor printing press to their driving mechanism to insure accurate registration in printing the multicolors. The drive for each form cylinder includes a cylinder gear and a driven gear with an interposed idler gear meshing with the cylinder gear and driven gear and mounted for rotation in a movable support or carriage. The angular adjustment of the form cylinder relative to the driven gear is effected by adjustable movement of the idler gear support, thereby moving the idler gear relative to the cylinder gear and drive gear. Invented by Herman P. Clauberg, Hasbrouck Heights, N. J. Assigned to R. Hoe & Co., New York, N. Y. Application December 28, 1939. 10 claims.

2,276,525. APPARATUS FOR INKING PLATE CYLINDERS, such as those on rotary presses, which insures that a uniform ink film of a desired thickness will be presented to the web by the printing cylinder; which avoids ink accumulations on the printing cylinder; reduces the number of ink transfer rollers required and permits a lower boiling point ink to be used. These ends are accomplished by providing a clearance between the form roller and the roller which delivers ink thereto, and continuously supplying to such clearance a sufficient volume of ink to provide the clearance with filled ink at all times. The clearance is such that the film of ink transferred to the printing cylinder from the form roller is of uniform and desired thickness. Invented by Henry R. Trotter, Glencoe, Ill. Assigned to R. R. Donnelley & Sons Co., Chicago, Ill. Application March 7, 1940. 3 claims.

2,276,662. INKING MECHANISM FOR PRINTING MACHINES of the type utilising water-thin aniline printing inks. According to the present improvements, there is provided in the ink duct, a series of walls or baffles extending parallel to the axis of the fountain roller and having their upper edges near to but not touching the cylindrical surface of the roller. These baffles act as weirs allowing the desired amount of ink to be carried along by the roller. At the same time the baffles break the flow of ink in the ink trough which otherwise would result from the rapid rotation of the fountain roller, were it not for the presence of preventive means. The baffle plates are perforated near their lower edges in order to permit the free flow of ink between the compartments formed thereby so as to equalize the level of the ink throughout the ink trough. The baffles may consist either of flat plates extending upwardly toward the fountain roller or may be bent near their upper edges, as desired. Invented by Walter Matuschke, Berlin, Germany. Unassigned. Continuation of application Serial No. 259,890, March 4, 1939. This application July 22, 1939. 3 claims.

2,277,405. METHOD FOR REGISTERING PRINTING FORMS. The invention can be employed when using any of the usual base plates and any of the usual forms of printing plates common to the industry. First a proof is made from the primary form, usually black, and means are provided for securing the proof sheet in a definite position on another form which is to be used with the black, first oiling the sheet so as to render it transparent. The plates which will be employed in the second impression are placed in approximately the correct position on the base plate, and by comparing the position of the black proof to the position of the plates on the base plate, their position may be adjusted by means of the usual registering hooks. Another sheet of paper which has been given the first printing impression is held, by the same fastening means referred to above, over the second form which has already been inked and a proof is pulled. If further adjustment should be necessary, it may be accomplished with the same oiled sheet used for preliminary register. During this entire time, it is not necessary to employ the proofing press, except where impressions are to be made, and, even then a planer and mallet may be used instead to make the impressions sufficiently for registering purposes. Invented by Kenneth G. McKiernan, Chicago, Ill. Unassigned. Application September 9, 1938. 6 claims.

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Use of Primary Tin in Type Metals Prohibited by Amended WPB Order

EFFECTIVE April 1, primary tin may not be used in the manufacture or alloying of type metals, and neither primary nor secondary tin shall be added to remelt bearing metal originating in the user's own plant. The use of tin in solder or solder foil in the preparation and manufacture of printing plates is subject to special regulations. This by reason of Conservation Order M-43-a as Amended and issued by Director of Industry Operations J. S. Knowlson on March 18.

A special list of restrictions on the use of tin is included in the amended order. Of particular interest to the printing industry, besides government agencies and civilian industry are these restrictions: From and after the effective date of this order, no person shall, unless specifically authorized by the Director of Industry Operations (1) Manufacture or use any lead base alloy (other than solder) having a tin content of more than 12% by weight; (2) Manufacture or use any tin alloy (other than solder) having a tin content of more than 12% by weight; (3) Prior to May 1, 1942, manufacture or use any solder having a tin content of more than 38% by weight, and on and after May 1, 1942, manufacture or use any solder having a tin content of more than 30% by weight; (4) Use any virgin tin in the manufacture of type metal.

Exceptions to the limitations specifically set forth in the order are as follows: (1) Use of secondary tin metal in plates and type metal for the printing, publishing and related service industries; provided that the amount of secondary metal so used by any person during any calendar quarter shall be limited to the amount used by him for such purposes during the corresponding calendar quarter of 1940; (2) The use of solder or solder foil in the preparation and manufacture of printing plates; provided that the tin content of such solder and solder foil, respectively, shall be limited from the effective date of this Order to May 1, 1942, to 38% by weight, and on and after May 1, 1942, to 30% by weight; and provided further that no person shall use more solder or solder foil for such purposes during any calendar quarter than the quantity, respectively, so used by him during the corresponding calendar quarter of 1940; (3) The reuse of remelt bearing metal originating in the user's own plant, provided that no virgin tin or secondary tin shall be added thereto.

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NEW ENGLAND GROUP *To Meet*

THE fifteenth semi-annual meeting of the New England Daily Newspaper Composing Room Executives' Association will be held on Saturday and Sunday, May 16 and 17 at the plant of the Bridgeport (Conn.) *Post*. Conference headquarters, however, will be at the Stratfield Hotel in Bridgeport where the get-together on Saturday, and the dinner and business meetings on Sunday will be held.

Joseph Wynkoop, foreman of the Bridgeport *Post* composing room, is chairman of the local committee on arrangements.

The program outline is as follows:

Saturday, May 16—Get-together.

Sunday morning, 9:30 o'clock—Inspection of the Bridgeport *Post* plant, 11 o'clock—Meeting with sales representatives who will discuss printing equipment and supplies. 1 o'clock—Dinner. Immediately following the dinner, Walter B. Patterson, Director of Agencies, Mergenthaler Linotype Co., talks on *Linotype Life Extension*, following which the new Linofilm on *Type Design* will be presented. Following the speaker's address a forum period will be held at which composing room problems will be discussed. The final order of business will be election of officers.

Edwin A. Hutt, Composing Room Superintendent of the Beverly (Mass.) Evening Times, *and President of the New England Newspaper Composing Room Group, will preside at the Bridgeport meeting in May.*

Following are officers of the New England Daily Newspaper Composing Room Executives' Association: President, Edwin A. Hutt, Beverly (Mass.) *Evening Times;* Vice President, Raymond J. Cox, Bangor (Me.) *Daily News;* Secretary, William Madden, Worcester (Mass.) *Gazette;* Treasurer, Lewis R. Greene, Westerly (R.I.) *Sun;* Directors: Daniel Stevens, Middletown (Conn.) *Press;* Ralph Johnson, Brockton (Mass.) *Enterprise;* D. O'Brien, Hartford (Conn.) *Times*.

More Output for Defense

More Output for Defense is title of letterhead size booklet, consisting of 18 pages, containing many illustrations, published by Reeves Pulley Co. Variable Speed Control applications in defense plants are shown. Printed in red, blue and black ink. Ask for bulletin G-423.

ILLUSTRATION ETCHED ON EDES TRIPLEMETAL-120 SCREEN

You had better listen-NOW!

The amount of copper available for ALL non-military use is less than one-fourth of normal supply—and shrinking.* TRIPLEMETAL for photo-engraving will serve 99% of all halftone production (150 screen or coarser)—not only serve but serve equally well. Full production of TRIPLEMETAL is reasonably assured. NOW—will you listen?

*Refer to Ruling M9c

EDES ENGRAVING METALS — TRIPLEMETAL

THE EDES MANUFACTURING CO.
PLYMOUTH, MASS.

AUTHORIZED REPRESENTATIVES

CHICAGO: Chemco Photoproducts Co.
NEW ORLEANS: Chemco Photoproducts Co.
ST. LOUIS: Mid-West Photo-Eng. Supply Co.
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CANCER CAN BE CURED!

This is the welcome message your dollar will bring to thousands of cancer sufferers in 1942. Help us carry on the fight.

Enlist in your local field army now.

Buy package labels today.

If you live in the Metropolitan Area, address the New York City Cancer Committee, 130 East 66th Street.

AMERICAN SOCIETY FOR THE CONTROL OF CANCER
New York, New York

TECHNICAL LITERATURE

Production and Mechanical Executives wishing to secure copies of the literature described below may do so by addressing the manufacturer direct, or by sending request to Printing Equipment Engineer. *We'll be glad to pass your request on to the manufacturer. Literature is gratis except where noted.*

Care of Synthetic Rubber Rollers

To help conserve vitally needed materials, The Dayton Rubber Mfg. Company has prepared a series of 8½ in. by 10½ in. illustrated cards which will be mailed to users of synthetic rubber rollers. One of the cards will be forwarded each month to known users of synthetic rubber rollers. The card may be placed in the pressroom. On the card is explained how the life of this type of roller may be extended. Explicit instructions are given for the washing-up and care of synthetic rubber letterpress and offset rollers. Instructions are given for extreme cases where dried ink has been allowed to accumulate on rollers. The entire series may be obtained by writing The Dayton Rubber Mfg. Co., Dayton, Ohio, direct.

Two More Linotype Life Extension Booklets

The second and third booklets in Linotype's Life Extension series are now being distributed. The second carries the specific title *General Maintenance—Part I*, and the subtitle "Routine Checkups, Cleaning and Lubrication." The third booklet is entitled *General Maintenance—Part II* and deals with "Assembling." Linotype headquarters reports that the booklets are being received with enthusiasm the country over, and that many Linotype owners have expressed appreciation of the policy that is so tangibly helping them to insure the continuing usefulness of their machines, particularly in this time of emergency.

Gilbert Poster

Another example of how the printing arts are helping stimulate public morale, and strengthen the determination to win a quick, complete victory is an arresting four-color full-page bleed advertisement published in the April issue of *Fortune* by the Gilbert Paper Company. Large 22 in. by 28 in. posters in color are offered free for posting in factories, offices, public places, etc., to anyone writing the Gilbert Paper Company at Menasha, Wisconsin.

This represents a large order to the printing trade. The poster is an effective piece for building worker morale.

Counting, Timing and Recording Devices

The Production Instrument Company announces a new 50-page catalog on Counting, Timing and Recording Devices. Illustrated and described are important developments in mechanical and electrical counters; recently developed Predetermined Electric Counters; and High Speed Coil Winding Counters. Also described are Actuating Switches for Electric Counters, together with numerous applications of photo-electric counting; Signal-Graph Automatic Timing and Recording Devices; and Time Totalizers, which measure and record the total operating time of alternating current circuits. Copies of Catalog 42 are available on request to the Production Instrument Company, 704-08 W. Jackson Blvd., Chicago.

Saw-Trimmer Folder

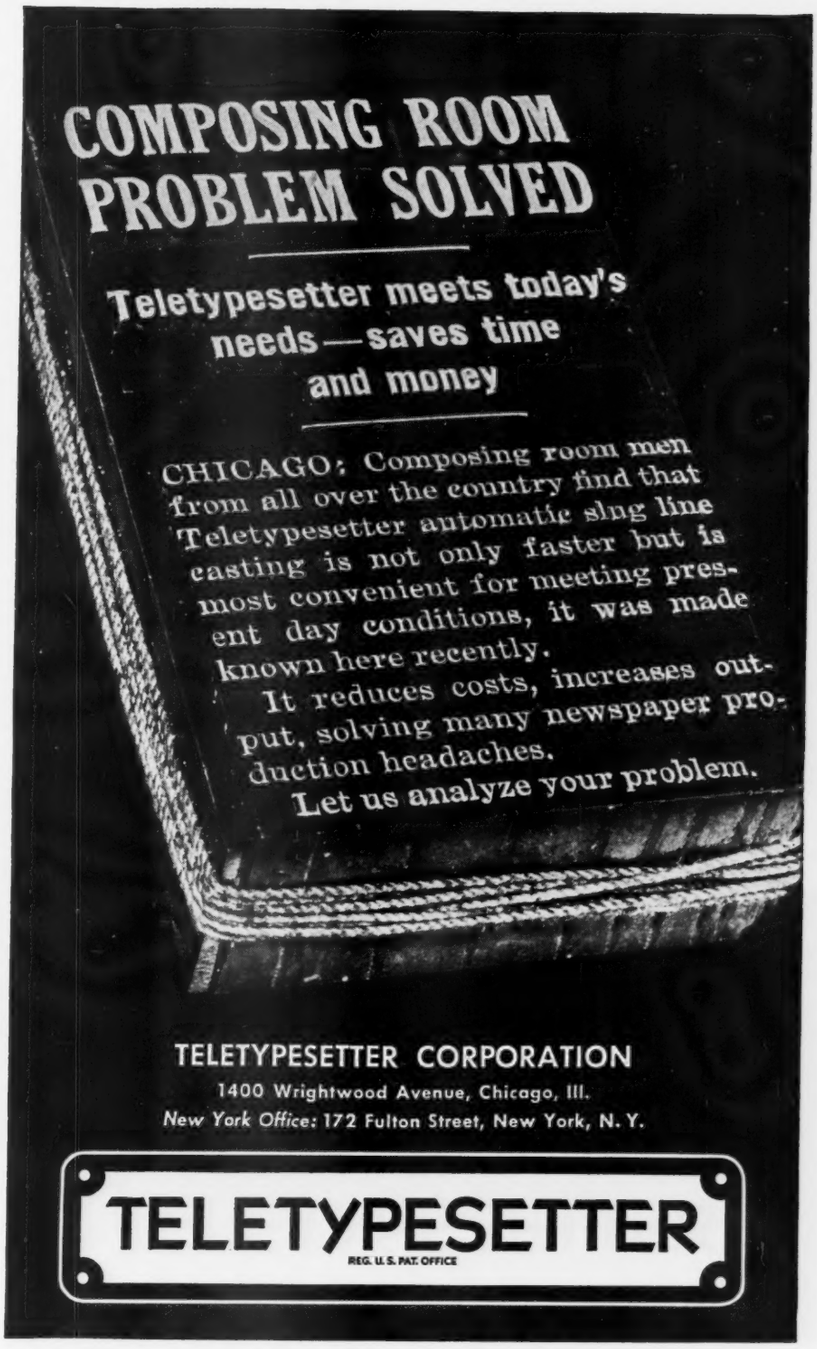
Milwaukee Saw-Trimmer Corporation has issued an 8 page well illustrated folder printed in two colors in which is illustrated and described the C&G No. 3-A Saw-Trimmer for composing room use. Parts making up the saw and illustrated and described separately. Other C&G composing room equipment is shown on the last page of the folder.

One Minute Please!

Four page bulletin published by American Publishers Supply shows costs of Superior Glutex Stereotype Gummed Packing Felt in various quantities, in sheet and strip form.

Testing Paper for Printing Quality

Bulletin entitled *Testing Paper for Printing Quality* consists of eight pages, 8½ in. by 11½ in. Prepared by M. S. Kantrowitz and R. H. Simmons of the Division of Tests and Technical Control, U. S. Government Printing Office. Discussion related to specific information concerning those qualities of paper which tend toward satisfactory results in printing. Some subjects treated are Ink Receptivity, Porosity, Air Permeability or Density, Surface Strength (Picking), Paper Factors, Formation, Opacity, Flaking and Dusting of Surfaces, Moisture, Expansion and Contraction, Thickness, Color and General Appearance. May be obtained gratis by addressing Technical Director, Government Printing Office, Washington, D. C.


COMPOSING ROOM PROBLEM SOLVED
Teletypesetter meets today's needs—saves time and money
CHICAGO: Composing room men from all over the country find that Teletypesetter automatic slug line casting is not only faster but is most convenient for meeting present day conditions, it was made known here recently.
It reduces costs, increases output, solving many newspaper production headaches.
Let us analyze your problem.
TELETYPESETTER CORPORATION
1400 Wrightwood Avenue, Chicago, Ill.
New York Office: 172 Fulton Street, New York, N. Y.
TELETYPESETTER
REG. U. S. PAT. OFFICE

Manufacture of Ameripol or Rubber Printing Plates

Government's restrictions on rubber make available substitute materials for rubber printing plates interesting to the Graphic Arts industry. The B. F. Goodrich Company, has issued a new 9 page bulletin on *The Manufacture of Ameripol and Rubber Printing Plates*. Ameripol is the name of the company's synthetic rubber for making plates. Copies of the bulletin, No. 9810 are available upon request to The B. F. Goodrich Company, or through *Printing Equipment Engineer*. In the bulletin are discussed equipment needed for making either Ameripol synthetic rubber or natural rubber printing plates, matrix and required materials, processes for molding and data on physical characteristics of both Ameripol synthetic rubber and natural rubber plates.

Franklin Gothic Extra Condensed

Four-page folder shows specimen lines of Franklin Gothic Extra Condensed ranging in sizes from 12 pt. to 72 pt. Copy may be had from sponsor, Ludlow Typograph Company, direct, or in care of *Printing Equipment Engineer*.

Flexible Glues for Bookbinding

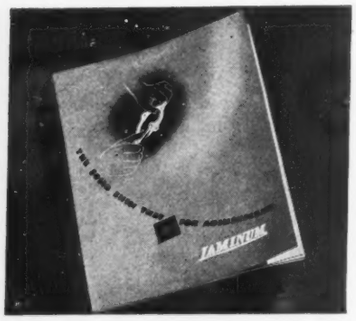
Technical Bulletin No. 24 has been published by the United States Government Printing Office. It is entitled *Flexible Glues for Bookbinding*. Size 5¾ in. by 9¼ in., 22 pages and cover. Prepared by Messrs. Kantrowitz, Spencer and Blaylock of the Division of Tests and Technical Control, United States Government Printing Office. Purpose of bulletin is to make available to the bookbinding industry information concerning formulas for flexible glues developed and used by the G.P.O. Price 10c per copy. May be obtained from Superintendent of Documents, Government Printing Office, Washington, D. C.

Humidifier Bulletin

An eight-page technical bulletin published by Armstrong Machine Works gives "Facts You Should Know About Humidification," "How To Select Humidifiers," and "Hook-up Diagrams and Recommended Pipe Sizes." Bulletin also illustrates and describes Armstrong Unit Humidifiers, Air-Operated Explosion-Proof Humidifier and Heavy-Duty Floor Type Humidifier. This bulletin is 8½ in. by 11 in., is well illustrated and contains considerable technical data applicable for use in the printing plant.

Laminated Shim's Booklet

An interesting new 8-page booklet which gives a history of the development of industrial and mechanical applications of the laminated shim since the founding of the company, has just been issued by Laminated Shim Company, Inc. The book describes the use of the shim for fitting of ma-



chine parts in original assembly, as well as for making service adjustments. Copies may be obtained by addressing Laminated Shim Company, Inc., Glenbrook, Connecticut.

A. C. Preset-Speed Printing Press Controllers

GEA-3663 Bulletin, entitled *A.C. Preset-Speed Printing Press Controllers*, fully illustrated, has been published by General Electric Company. Controllers illustrated and described are for application to most any time of printing production machinery, including small and large letterpress, offset-lith and gravure presses, tin-plate presses, embossers and cutters and the like, where control equipment must be made adaptable to peculiar requirements of printing production machinery. Specific application to machine is indicated. Individual details of controllers illustrated and explained.

Operator's Handbook

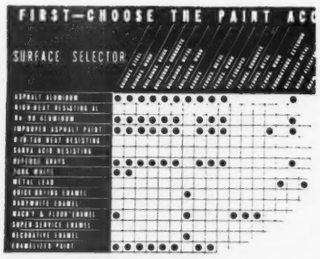
An *Operator's Handbook*, (3¾ in. by 6½ in.) consisting of 96 pages and cover, has been published by The B. F. Goodrich Company. Booklet contains much new data on obtaining maximum service from truck tires. Included are charts and tables showing value of proper inflation and loads, dangers in over and under-inflation, mis-matching of dual tires, causes of uneven tread wear, and the effects of overloads and excessive speeds in generating heat. These and other factors are summarized in 20 practical rules showing truck operators how to obtain maximum service life from truck tires.

Ink Gun Bulletin

In four page bulletin published by Diamant Ink Gun is illustrated and described the Diamant Ink Gun for inking proof presses and presses of the smaller type.

Paint Selector

A means of selecting paint without detailed technical study of properties of all finishes that might be suitable for a given application is provided in the Valdura Paint Selector, issued by American-Marietta Company, 43 East Ohio Street, Chicago, Ill. The Selector folds to letterhead size. Two charts are embodied in the Selector. Fifty-one divisions on the first chart list all types of surfaces that might be en-



countered in industrial, commercial and residential painting, and under which are listed one or more paints suitable for the application. A second chart gives all properties of each paint to facilitate selection of the finish most suitable when a choice is offered by the first chart. Information included is whether the finish may be used under certain conditions. Included are tables of geometric equations, light reflection values of standard colors, and tables to aid in estimating paint requirements for exteriors and interiors.

Suspension Type Humidifier

For textile mills, paper and printing plants where control of humidity is important in manufacturing, or for the storage of hygroscopic materials such as chemicals, leather, etc., a new industrial humidifier has been announced by Carrier Corporation. The unit is ceiling-suspended for saving floor space and it may be moved readily to accommodate equipment layout changes. Suitable for use in single or in multiple, the unit affords flexibility when extensions or alterations are to be made.

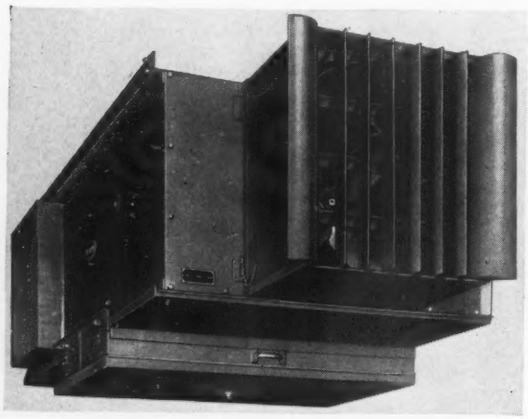
The humidifier is available in two capacities of 4800 or 6150 cu. ft. of humidified air per min., and evaporates up to 96 lbs. of water per hr.

Consisting of a propeller type fan direct-connected to a motor, flooding pan, water absorbent surfaces, heating coil, automatic dampers and controls, directional air grilles, and lint catchers to clean the return air, the unit is a complete mill conditioning system in itself. It is built in separate sections to facilitate handling and installation. Outside installed dimensions are 57½ in. wide by 39½ in. high by 97 1/16 in. long.

In addition to humidifying the air, the unit cleans, circulates and heats the air during winter. In summer the unit may be operated to provide evaporative cooling, cleaning and uniformly circulated air.

Built in two sections to facilitate handling, the unit, designated as the Carrier type 43G, includes fan and motor, humidifier pack, heating coil, drip pan, dampers, lint catcher and housing. Manufacturer states the unit is rugged in construction and all parts easily accessible for inspection and servicing.

Details are presented in a descriptive publication (43G-1) recently published by Carrier Corporation, available upon request to the company direct or in care of *Printing Equipment Engineer*.



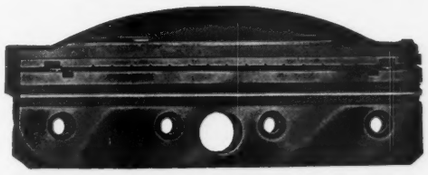
View of Carrier Corporation's new Suspension-Type 43G Humidifier. In addition to humidifying the air it will clean, circulate and heat the air during the winter in printing and paper plants and textile mills.

Unusable and scrap printing metals will help the industry if returned to your printing metals supplier.

Recently, John L. Wood who is now stationed at Army's Fort Bragg returned to Raleigh, N. C., to pay a visit among friends and relatives and to call on Composing Room Superintendent Ellis Speer of The News and Observer. *Mr. Wood has been an employee of the paper for 14 years. It was explained that he wanted to "keep his hand in" Ludlow operation when the photographer snapped this picture.*

Once a month search your plant for scrap printing metals and return them to your regular metals supplier.

We Have Something To Brag About In "STAR" Molds



The test of time has substantiated our claims with regard to this most important adjunct on a typesetting machine. They have been giving satisfactory service for years in numerous plants throughout the country.

No *harder — more accurate* product is available.

It takes a year to make a "STAR" Mold. In the interim, between operations, it is seasoned, so that it will warp less readily when placed in service. It is brought up to heat twice in the course of manufacture, to give further resistance to warping.

A specially selected steel, and a process of hardening adapted to this steel gives a high degree of hardness to insure long service.

It is, therefore, to your advantage to specify "Star" Molds on replacement orders.

ACE BELTS
FOR EVERY PART OF THE MACHINE
DO NOT STRETCH — LAST LONGER

Precision
TRADE ★ MARK
Parts

LINOTYPE PARTS COMPANY

NEW YORK
203 Lafayette Street

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ZINK CUT CEMENT PRICES in the United States: 75c per large tube; $6.00 per dozen tubes; $5.00 per dozen tubes in gross lots.

The Redesigned Nozzle

on the tube in which we deliver Booth's Zink Cut Cement has caused many favorable comments by mechanical executive users.

These men tell us that the new nozzle is effective in controlling the flow, prevents waste and definitely prevents oozing of the cement from underneath the cut.

This cement fastens all kinds of cuts to wood or metal base. Holds with the grip of a tiger's paw.

• • •

Booth's Black Rubber Rolls

for line-composing machine keyboards are made carefully because they are important to you in securing dependable cam response. Constant diameter from end to end. Maximum resilience compels instant cam action.

If you are not now using these fine rolls order a trial pair at $1.25. By the dozen, $7.50.

We are suggesting that your firm place on all purchase orders sent to us the properly endorsed statement provided in OPM's A-10 Rating Under Preference Rating Order P-100 for Repair, Maintenance and Operating Supplies.

THE E. A. BOOTH RUBBER COMPANY
364 ROCKEFELLER BUILDING • CLEVELAND, OHIO

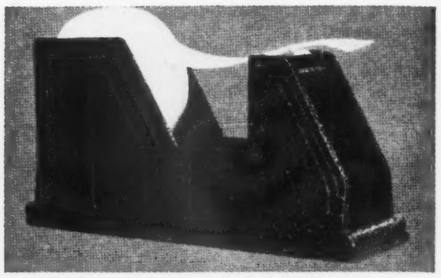
"FLECTO"
Gummed Backing Felt

POROUS — to permit the quick and easy escape of steam, coated with glue that will not slip or leave the matrix under heat. Its adhesive will not crack, peel or crystallize under any climatic conditions. Made in gauges .021, .025, .030 and .035, in sheets 18" x 24". And in gauges .040, .045, .050 and .060 in sheets 18" x 22"— cut in strips without extra charge. Free samples on request.

"TRU-MOLD"
Cork Molding Blankets

Get better molding with "MATCHED" Sets. A "MATCHED" set is matched in weight and density. Uniform density throughout these blankets gives "TRU-MOLDING" over the entire surface of the form. We furnish HARD and EXTRA HARD (Special) blankets that are matched in weight and density.

"PLATE-TAK"
Cut Mounting Tape



No Tacks! No cement to squeeze out! No water or heat used!

Simply lay a strip of this SUPER-THIN tape under the cut; press down by hand and the cut is there to stay. When through, the tape strips off, leaving clean surfaces on both cut and base . . . A word on the dispenser — it brings still more speed, convenience and economy to the use of Plate-Tak.

EASTERN NEWSPAPER SUPPLY

9603 Northern Boulevard **Corona, New York**

BOOKS RECEIVED

(Continued from Page 2)

tribution. Section 2 is devoted to use and maintenance of all kinds of rollers, staggering plates, pitch line, packing, cylinder cut, impression setting, figuring plate sizes and packing and sheet cutoffs. Section 3 tells the pressman about newspaper composition, photo - engraving, copy, photography, art and retouching, how engravings are made, and a few things which should be understood by the pressman about stereotyping. Section 4 contains a few tips about metal. Sections 4 and 5 describe features of the various makes of presses.

In Section 6 are discussed fudge cylinder and manufacture of news inks. Section 7 is devoted to color printing on soft and hard packing presses. In Section 8 is discussed the manufacture of newsprint. Section 9 contains information about splicers and rewinders, weight and length of newsprint rolls, air conditioning and newsprint waste.

In Section 10, reels and pasters are illustrated and described. As stated above, Sections 11 and 12 are devoted to the gravure process and gravure printing, including color gravure by the Dultgen process.

Lithographic Halftone Photography

A FUNDAMENTALLY practical book devoted to lithographic halftone photography has just been published. The book was prepared by Adam Henri Reiser (and a lithographic craftsman who prefers to remain anonymous). Readers of *Printing Equipment Engineer* have been following Mr. Reiser's informative technical plate-making articles for the past several years and know him to be a profound student in lithographic procedure.

In justification of the pedagogical method used for instruction about the technique of producing negatives for reproduction by lithography, the author points out in his preface that: "From a pedagogical point of view it is evident there are certain logical steps in any process of learning. Recognizing this, the form of instructional material that is known as the 'job sheet method' has been adopted for presenting the contents."

In the volume will be found nine actual glossy photographic prints with lithographic reproduction opposite each print, all reproduced on offset stock. These reproductions have been printed without benefit of opaquing, staining, matching or retouching of the original. Step by step instructions are given from sizing up copy to camera board, camera adjustment, taking the shot and developing the negative.

Following each detailed set of instructions for producing each type of lithographic negative, based on the particular classification described, are a set of questions which the camera operator might ask himself in order to determine how accurately or how far he went astray in making the negative.

Helpful miscellaneous information is also included covering such subjects as *Kodagraph Contact Screen Process*, *Processing Magenta Negatives*, *Procedure for Making Screen Positives for Photo-Lithography*, together with the chemical formulas necessary, and a list of special materials needed for the Kodagraph Contact Screen Process.

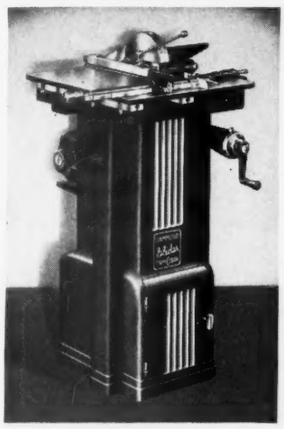
Lithographic Halftone Photography — By Adam Henri Reiser (and a lithographic craftsman who prefers to remain anonymous). Size 6¼ in. by 9¼ in., bound in gold stamped blue cloth with invisible Wire-O binding. Nine glossy photographic prints with offset-lith reproduction opposite each. Many illustrations. Published by Waltwin Publishing Co., 1776 Broadway, New York, N. Y. Price. $4 per copy plus shipping charges.

Predetermined Electric Counter

The Monitor Model PDC-E Predetermined Electric Counter, announced by Production Instrument Company, was designed for objects passing on a conveyor or which are delivered from a machine. Any number from 1 to 9999 can be set up quickly on this instrument by turning knob pointers to the proper digits. When the count reaches the predetermined number thus set up, a control and signal circuit is closed (or opened). This circuit may be used to sound an alarm or operate a relay to perform any desired function. Counting ceases at the predetermined number until a reset lever is depressed by hand (this operation requires less than half a second), making the instrument ready for a new count cycle. To change the predetermined number, the knob pointers

HAMMOND

KNOWN BY 8000 SATISFIED USERS



HAMMOND G-3
GLIDER TRIMOSAW

It glides, it's smooth — operates on large ball bearings in finely machined ways. Designed for quick setting it assures permanent accuracy. Work holder clamp has an opening of 42 picas and will hold material as small as 8 pts. Saw Arbor adjustable, oil sealed, permanently interlocked, 7" diameter, special alloy steel Saw Blades provide longer service. Durasteel Trimmer Tools lock securely by hardened steel wedges and set screws — not set screws alone. Accurately machined and keyed "V" pulleys — plus "V" Belt provide the modern machine tool drive. Saw Raising and Lowering Mechanism adjustable to points and picas. Completely enclosed features insure safety to operator.

Model R-3 Hammond Radial Router is built to meet demands for speed, ease and sensitivity, at a medium price. It's the unusual combination of a radial router, straight-line router, beveler, rabbeter, and shell plate mortiser. It is the ideal router for medium size photo-engraving and newspaper plants, and as an auxiliary machine for larger plants.

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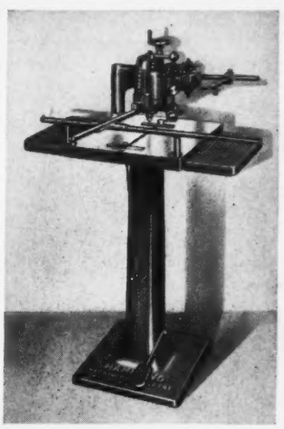
1604 DOUGLAS AVENUE • KALAMAZOO • MICHIGAN
EASTERN BRANCH - 21 WEST 22ND STREET, NEW YORK CITY



HAMMOND R-3
RADIAL ROUTER

View of Model PDC-E Predetermined Electric Counter. Counter automatically ceases operation when pre-determined number for which counter has been set is reached. At this time a control and signal circuit may sound an alarm or operate a relay to perform any desired function.

are turned to the proper digits before resetting.

Being electrically actuated, the Monitor counter may be located near to or at a distance from the things being counted. In some installations they are grouped in a control room where one operator controls functions at distant points in the plant.

These counters, states manufacturer, are actuated by any switch, relay or photo-electric unit with a closed period of 0.035 sec. or more and an open period of 0.040 sec. or more.

A bulletin describing the Model PDC-E in detail will be sent by Production Instrument Co. or through *Printing Equipment Engineer* upon request.

Speaking Engagements

Harry L. Gage, Linotype vice president, will address the Junior Executives' Club of Philadelphia, April 30, on *Type Character*. Following his talk, the new Linofilm on type design and matrix production will be presented. May 16, Mr. Gage will talk on *The War's Significance to the Craftsmen*, at a Craftsmen's district conference to be held in New York, N. Y. On March 10 he spoke on *Type Design and War*, at a meeting of the Baltimore Club of Printing House Craftsmen.

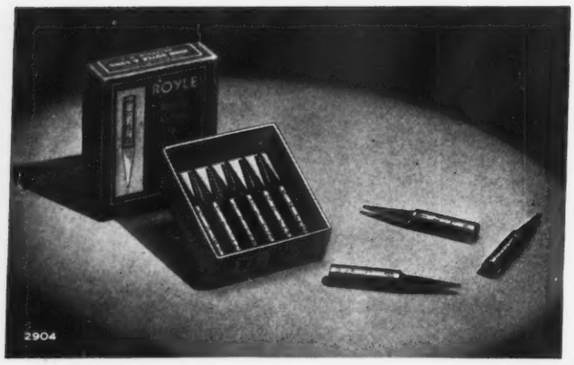
YOU CAN GET DELIVERY ON THE NO. 3-A C&G SAW TRIMMER NOW!

Don't handicap your make-up men with obsolete or worn-out equipment. C&G No. 3-A Saw Trimmers can still be delivered on short notice.

The C&G No. 3-A Saw Trimmer is a production machine built to precision accuracy. It is easy and safe to operate.

A new circular describes in detail the Positive Work Holder, Any Angle Gauge, Balanced Saw Arbor with Automatic Indexing, Roller Bearing Gauge, patented Universal Saw Blades with Saw Grinding Attachment, and many other exclusive features. A copy will be sent at your request and without obligation.

MILWAUKEE SAW TRIMMER CORP.
610 EAST CLYBOURN STREET, MILWAUKEE, WISCONSIN



ROUTING CUTTERS THAT CUT!!

Choose Style According to Use

Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. *Order Direct Or Through Your Dealer . . . Be Sure It's a Royle.*

Write for catalogue 425

ROUTERS · TRIMMERS
BEVELERS · SAWS

JOHN ROYLE & SONS

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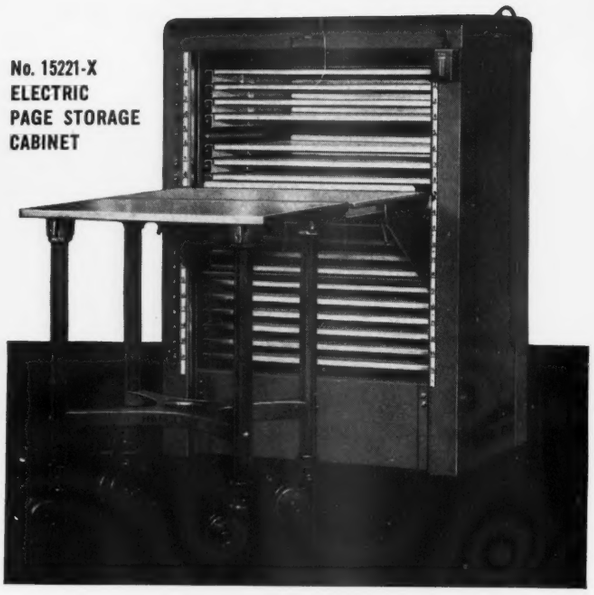

No. 15221-X
ELECTRIC
PAGE STORAGE
CABINET

SAVE FLOOR SPACE

EACH ELECTRIC PAGE STORAGE CABINET HANDLES TWENTY FULL SIZE NEWSPAPER PAGES

It is no longer necessary to clutter up make-up space with a lot of extra trucks. Twenty pages can be stored quickly and without physical effort in the Hamilton Page Storage Cabinet. Using this cabinet releases trucks for twenty extra pages and saves a lot of floor space and confusion.

Greater Safety

Elevating mechanism positively cannot operate unless letterboard is either fully in the cabinet or completely on the elevating shelf.

Electrical Equipment

No special power wiring needed . . . plugs into any 110 volt, 60 cycle, A. C. circuit. Fifteen feet of heavy cable with plug supplied.

Send in the coupon for full information on this new method of handling heavy forms

Hamilton Manufacturing Company
TWO RIVERS, WISCONSIN

Send in this coupon

HAMILTON MANUFACTURING COMPANY, Two Rivers, Wisconsin PEE-5-42
Send me by return mail complete information on the Electric Page Storage Cabinet.
Name _____
Firm _____
Address _____ City and State _____

NEW! DIFFERENT! AT-A-GLANCE COPY FITTING

4000 TYPE FONTS
763 TYPE FACES
EVERY SIZE **4 to 18 pt.**

with the

AM. TYPE FOUNDERS
BAUER · CONTINENTAL
EUROPEAN · INTERTYPE
LINOTYPE · LUDLOW
MONOTYPE

All popular type faces are listed according to manufacturing source and alphabetically arranged. Simple scales show "at a glance" the exact character count for every size type from 4 to 18 pt., up to 30 picas, without mathematical computation of any kind. Handy pocket size, 5" x 6½", attractively printed in two colors on fine, durable stock. Plastic bound with cellulose laminated covers.

The Answer to Every Copy-Fitting Problem Now at Your Finger-Tips!

If you have anything to do with translating the written word to the printed work, you owe it to yourself to investigate the simplicity of the Haberule Visual Copy-Caster. Leading composing rooms, advertising agencies, direct advertisers, etc., are ordering — and *reordering*—as many as 6 and 12 at a time!

5 DAY EXAMINATION PRIVILEGE..So that you may decide for yourself how much the Haberule can do for you, we are willing to assume all the risk. Mail the coupon today for your copy of the Haberule. Send no money, or, if you prefer, remit now and save postage.

——— SEND NO MONEY UNLESS YOU PREFER ———

THE HABERULE CO., 209 West 38th St., New York, N. Y.

Send me.....copies of the Haberule Visual Copy-Caster. On delivery, I will pay the postman $3.50 each, plus postage. If the Haberule fails to save me time and money, it is my privilege to return it within 5 days for full refund.

Name.....

Address.....

City.....*State*.....

☐ Check here if payment is enclosed, and we will pay postage. Same money-back guarantee applies.

ATTENTION: If New York City resident, add 1% sales tax. PEE 4-42

"Nice contrast, there, in black and white."

"Yeah! That's what they say about WOOD MATS, too!"

WOOD FLONG CORPORATION
HOOSICK FALLS, N. Y.
551 Fifth Ave., New York City

WOOD DRY MATS
ALWAYS UNIFORM

Patterson Talks in Canada

Walter B. Patterson, Linotype's director of agencies, gave two talks in Canada in March. March 16 he addressed a luncheon meeting of the Toronto Graphic Arts Association on *The Wartime Power of Print*, and the next evening talked at a dinner meeting of the Ottawa Club of Printing House Craftsmen, where he introduced the Linofilm, *Type Character*. The film presents in sound and pictures the story of type design and matrix manufacture from the first rough sketch to the completed product.

THE HINDU

(Continued from Page 18)

year round is from 90 deg. to 110 deg. in the shade. We have many mechanical problems which do not exist at home—lubrication especially. I can assure you that before our editions are put to press the presses are so hot that one in America would be afraid to start the run. With all roller bearings under careful lubrication we are able to run our presses at a speed of 30,000 copies an hour.

Wages and Comforts of Life

As a matter of comparison, a stereotype journeyman receives Rs. 35 per month, a linotype operator Rs. 40 p. m., a journeyman pressman Rs. 35 p. m. A rupee today is the equivalent of 32c American money. Whilst, of course, these salaries seem ridiculous to those in America, there is the old, old saying: "It is not how much one earns, it is what one needs for the necessities of life in the particular environment in which one finds oneself." These chaps here are quite happy with the wages they receive and inasmuch as their need in food is a little rice and curry (they are mostly vegetarian) and in clothes a dhoti for himself and a saree for his wife, they are well provided for.

Indian Customs

Going from the sublime to the ridiculous, here are a few of the humourous things we Westerners notice in India:

The Indian cows as yet have not been trained to sit on a quart bottle. The cow and calf are trotted around from bungalow to bungalow, usually by small boys, and the desired quantity of milk is milked from the cow at your backdoor.

The coolies know little about housing and clothing problems. They wear nothing but a piece of rag held in place by a cord drawn around the waist and after a hard day's labour for which they receive six to eight annas (12 to 15 cents per day) they and their families (generally large ones) lie right down by the side of the road for their night's rest.

All Indians, be they of the wealthy educated class or the coolies, sit on the floor and eat their rice and ghee from a plantain leaf. Invariably, the men of the house and children are served first. After they have finished, the womenfolk sit for their meals. Time was when the young wife would save the leaf from which the husband had eaten so that she could eat from it later. This custom and others like it are now disappearing. In fact, not a few families use plates and spoons, and instead of squatting on the floor sit on chairs with meals served on tables, just like we do.

Considering present war conditions, my advice to those who want to travel is to see America first—then see India.

★ ★ ★ ★ ★ ★ ★ ★ ★

Select More Effective Color Combinations Quickly . . . with

★ EARHART COLOR PLAN

★ This practical color plan is helping many printers get more business . . . and likewise saving them time and money. The EARHART COLOR PLAN eliminates all guesswork in color selection . . . makes it easy to find out-of-the-ordinary, highly effective color combinations. You'll find this proven plan easy to use and just as applicable to the every-day kind of business as it is to the special job. Put this inexpensive device to work for you now. Order today.

Price $3.00

PRINTING EQUIPMENT Engineer
1276 West 3rd St., Cleveland, Ohio

★ ★ ★ ★ ★ ★ ★ ★ ★

Linograph Brochure

Linograph Company has published a brochure, 14 in. wide by 11 in., 16 pages, fully illustrated, which describes the Linograph line-composing machine and mechanical features. Furnished in capacities ranging from two to seven magazines on the machine.

Equipment and Supplies

(Continued from Page 20)

will be necessary to make some substitutions when present inventories have been disposed of.

Vice President J. C. Dunn of Vulcan Proofing Company, manufacturers of printing press rollers and blankets, states so far his company can ship promptly. In a few instances, alternative materials have been introduced in moderation in the company's products. The outlook for the ensuing few months is satisfactory as of this date (March 16), although the rubber situation is becoming more acute.

John T. McGrath of New England Newspaper Supply Company, manufacturers of newspaper press blankets and stereotype supplies, reports his company is working on several substitutes so as to be in a position to furnish customers with supplies as near as possible like those which the company has been supplying in the past. Present shipments are made as promptly as possible. A-10 rating under Preference Rating Order P-100 is required on purchase orders.

The situation in this supplies field in the next six months will be dependent upon restrictions placed upon basic raw materials by the Government, especially those materials necessary for war purposes.

Rollers

Vice President E. Byron Davis, of Ideal Roller & Mfg. Co., Chicago, comments as follows with respect to newspaper printing press rollers:

"Since some of our synthetics have not yet been put under priority regulations by the government, we are able to furnish to the newspaper industry synthetic rollers almost identical with those which we introduced originally. Some slight changes have become necessary in compounding due to restrictions of various raw materials, but essentially our rollers are the same and as available now as they have been in the past.

"Shipments are, therefore, made promptly in almost the same space of time as before.

"Due to the fact that our rollers are made of synthetics which are not as yet on priority, we do not require the A-10 rating, but we do encourage that it be used, so that should a restriction on any ingredient be enacted while an order is in our factory for manufacture, the A-10 rating will enable us to requisition needed supplies of any such restricted material and in this way prevent long delays on orders in the process of manufacture.

"In every instance where we have previously employed *true* rubber on other types of rollers, we have felt it expedient to develop alternative materials requiring a smaller percentage of true rubber. Accordingly, more than a year ago our laboratory outlined a course of research designed to provide us with an alternate formula for each of our present formulas.

"As a consequence, long before December 7th, we had compounded and made actual field tests of these alternate products in the plants of customers. They were ready and available for our customers as restrictions were made. We are now engaged in making a survey of the possible substitutions which may be made of these *alternate* materials, preparing for the time when the alternates will also be rationed. This is our present and most pressing laboratory endeavor.

"During the next six months we expect the restriction of many more materials than are now on the rationed list. The reason seems fairly obvious. Take the case of rubber. There is quite a large inventory of true rubber in the United States, but when you consider that normal daily usage is 20,000 tons and that the synthetic rubber output is likely to be only 15 to 20 tons a day until the completion of larger plants, it is easy to guess that we shall have a much more stringent rationing of rubber than we have yet imagined.

"The most natural substitution for the inadequate supply of true and synthetic rubbers would be reclaimed rubber, but with a demand of so many thousands of tons a day, it will not take long to use up

KEEP IN THE RACE

with

CHAMPION BLACKS

- *Champion Half-Tone*
- *Champion Super*
- *Champion Book*

As well known in the printing trades as are the heroes of fiction and fact — our Champions are champions in fact, not fiction. Prove to yourself their dependable performance.

Beneath this stack, experience, research and service are at your command.

Sinclair and Valentine Co.

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According to the U. S. government statistics, the publishing and printing industry ranks at or near the top of American industry in number of establishments, number of salaried employees, and in salaries paid. Printing has come far since its invention. Before the young man or woman who chooses to enter this field lies a career with attractive possibilities for professional success.

PRACTICAL TRAINING

in

Publishing and Printing

Instruction in the new and faster methods of type setting; learn short cuts in production processes. Course includes actual working practice with modern equipment. Graduates possess the benefit of a training eagerly sought by the industry for its IMPORTANT positions.

Write today! For detailed information, write Department of Publishing and Printing.

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• ROCHESTER NEW YORK •

Safety PLUS Efficiency

with **JUSTRITE** *Safety* **CANS**

Here's the safe, sensible way to store and handle benzine and other 'flammable liquids. Trigger handle keeps spout closed except when pouring . . . stops leakage and evaporation. Built to last for years. Body of heavy lead-coated steel, double seamed and soldered. Red baked enamel finish. Made in 7 sizes from 1 pint to 5 gallons.

Approved by Underwriters' Laboratories, Inc.

Ask your supplier or write for catalog and prices

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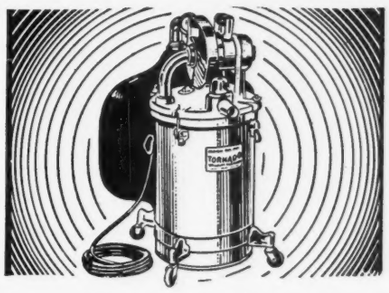


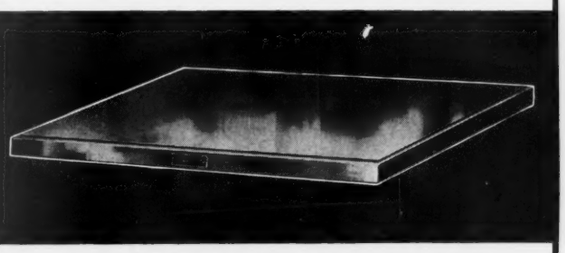
KEEP your plant clean — protect machinery — reduce power costs—salvage scrap — with the TORNADO Portable Industrial Vacuum Cleaner. Powerful. Portable. Picks up dust, dirt, chips, etc. Light weight. Large capacity.

Write for details and Free Trial Offer!

TAKE THE DUST OUT OF INDUSTRY — TORNADO — BREUER'S BALL BEARING PORTABLE ELECTRIC BLOWER

BREUER ELECTRIC MFG. CO.
5114 N. Ravenswood Ave., Chicago

SMOOTH
LEVEL • ACCURATE



CHALLENGE Semi-Steel IMPOSING SURFACES

Dependable as the bed of your cylinder press, these superior surfaces are cost-reducing equipment. Built to last — two inches thick — strongly reinforced — will not sag or "give." No coffin required; permits a larger working area. Rabbet around the edge is right depth for standard galleys. Investigate now. A size for every need. Write for prices today!

Challenge

THE CHALLENGE MACHINERY CO.

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Eastern Sales Office: 50 Church Street, NEW YORK

302

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☐ **COLOR SURVEY REPORTS**
Direct Mail, Products, Packaging and Space Advertising

☐ **SPECIMEN BOOK**
Showing 48 Colors

☐ **COLOR FACTS SERIES**
Important data on the best colors to use and why

☐ **EAGLE BLACKS**
21 blacks correlated to the most commonly used stocks

INDIVIDUAL _____

COMPANY _____

ADDRESS _____

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DIVISION GENERAL PRINTING INK CORPORATION
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CHICAGO CINCINNATI PHILADELPHIA JERSEY CITY
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Like SOLDIERS *alert for any unexpected thrust*

★ Stereo forces pursue the routine of regular editions poised for dynamic action when big news breaks . . . They have confidence in their skill, in their equipment and know that Certifieds will give them first casts of excellent printing quality in minimum time.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M, New York, N. Y.

Certified DRY MATS

the reclaimed material also. We shall then have to turn to some substitute which does not have its origin in the rubber tree. Likewise, some of the fillers and accelerators needed in the processing of rubber are disappearing from the market. In many cases our chemists have come to the rescue by pointing out other materials which can be used for these purposes. But the demand for those materials will soon create a shortage of them.

"It becomes a vital necessity, therefore, for each and every one of us to search through our plants for the small rubber articles that we can do without, and serve notice that we have found something else which will function just as well and which does not require the use of rubber. Pounds of rubber are discarded each day. Now these may be small and very petty items, but it is the small and petty items that are going to conserve rubber to the point where we can extend our inventory by possibly another six months and that may well be the six months during which we will win the war.

"In my opinion the real pinch will start somewhere near the end of this next six months' period."

The Rapid Roller Company, Chicago, according to President D. M. Rapport, is furnishing its products promptly under A-10 rating. Some alternative materials have been introduced in the company's products. Part of the alternative materials can be purchased without restriction; others are being allocated by the War Production Board in quantity to take care of present requirements. Mr. Rapport stated that if no further regulations will be issued by WPB or OPA the company will be in a position to supply the requirements of present customers without any interruption.

According to H. J. Hunt of the Dayton Rubber Manufacturing Company, Dayton, Ohio, his company is regularly furnishing rollers and shipments made in comparatively prompt time. A-10 rating under Preference Rating Order P-100 is required on purchase orders. Alternative materials to a small extent have been introduced in the company's products. Mr. Hunt asserted that the outlook for his company's field within the next six months is "anybody's guess."

Newspaper Printing Inks

While *Printing Equipment Engineer* is not permitted to quote directly from several printing ink manufacturers from whom information was requested, yet we are able to state the impression prevails that at present there is no shortage of black printing ink. The use of certain color printing inks, however, within the next few months will be curtailed by WPB by 25-30% inasmuch as these inks are made both with critical chemicals and metals. This curtailment of certain colored printing inks probably will occur both in the newspaper and commercial fields.

International Printing Ink, Div. of Interchemical Corporation, has been keeping ink consumers advised periodically through advertising space in the trade magazines. Brief comment submitted to *Printing Equipment Engineer* by a Division executive is as follows:

"There is no need to worry about getting black ink. Newspaper inks are made from mineral or linseed oil and carbon black. These materials are abundant in the United States. The rumor that black inks will be "brown" is untrue. Lack of toners (such as methyl violet) might affect the appearance slightly, but not enough to concern the reading public.

"Shortages have created serious ink problems. But they are chiefly problems of the ink manufacturer—not of the advertiser. The ink maker's research laboratories must devise new formulations not requiring defense materials. There are restrictions; there are priorities; there are transportation difficulties. In spite of all this, ink is being produced in greater quantities than ever before to meet the requirements of newspapers and magazines with the highest circulations in history and to meet the needs of packagers who are selling more goods to a growing army of workers with money to spend.

". . . Advertisers and printers may be told in a few cases that they cannot use *exactly* the color they specify. But from the visual standpoint, advertisers stand a pretty good chance of getting what they ask for. When they want a red, or a blue, or a green, that's what they'll get.

"However, conditions change rapidly in these fast moving times. A pending government printing ink order may limit the amount of printing ink which may be manufactured. This will not necessarily change the picture because the reduction in use of color printing for certain purposes should keep supply and demand in approximate balance."

Newsprint

According to a statement made recently by George A. Renard, Acting Chief of the Printing and Publishing Branch of WPB, there is at present a sufficient supply of newsprint flowing from Canadian and United States mills. While the future cannot be predicted, the present picture indicates that there should be a sufficient supply of newsprint for ordinary needs.

Photo-Engraving Equipment and Supplies

IN THE photo-engraving equipment and supplies field, not much definite information is procurable. Equipment and supplies, it seems, are not being furnished as customary because of material shortages and restrictions on materials.

R. R. Robertson, manufacturer of photographic - lithographic photo - engraving equipment, Chicago, states that he is making shipments promptly on regular equipment and on equipment for which a preference rating certificate is supplied. Repair parts, purchase orders bearing an A-10 Rating are required. On new equipment a rating of better than A-3 is required.

"We have found it necessary," states Mr. Robertson, "to substitute materials which we previously used and which are now scarce to replace those war-essential materials, but this can be done only in a few instances. During the next six months the new equipment business will be very quiet."

Atlantic Zinc Works, manufacturers of photo-engravers' zinc plate stock, reports shipments are being made promptly. Customers prefer the new and improved plastic backote on zinc plate which is now being used in place of the former chromium plating as an acid resist.

Secretary R. H. Kelley of John Royle & Sons, Paterson, N. J., makers of machinery for photo-engravers, as well as router bits for all photo-engraving purposes, states: "Service to newspapers and other branches of the Graphic Arts is but one department of our business. Our plant principally is engaged on machinery for war work.

Mr. Kelley continues as follows: "With war production rapidly displacing the manufacture of machinery for civilian industries, many users of Royle routers, bevelers, saw tables and trimmers are giving thought to reconditioning. Having served the Graphic Arts for more than 80 years, we look forward to full scale resumption of manufacture eventually. Meanwhile, parts and reconditioning are obtainable by those authorized to use the A-10 Rating Under Preference Rating P-100. Loan router heads, pulleys and other units are available to Royle customers upon request for use during repairs. In the next six months we anticipate no serious difficulty in supplying those furnishing the A-10 rating or better."

★ ★ ★ *Use Ideal Plate Gums* ★ ★ ★

Adaptable for plates used on high-speed printing of cardboard, cloth, wood and rough papers. Made both from rubber and synthetic compounds to meet exacting requirements. Special formulas for aniline and linseed base inks.

Ideal gums are noted for their high tensile strength. Mold easily and are abrasive-resistant. Save makeready time. Use Ideal plate gums for your plates and be assured of brilliant colors and uniform smooth coverage on flat tints.

IDEAL ROLLER & MANUFACTURING COMPANY CHICAGO, ILLINOIS LONG ISLAND CITY, N.Y.

SAFETY · RELIABILITY · ECONOMY
CLINE
PRESS DRIVES
and
CONTROL
Reels, Tensions
and Pasters...
CLINE SYSTEM
CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York. 220 East 42nd Street
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a few copies of the
1942 PRINTING
EQUIPMENT CATALOG
available for Printing Executives
Price $1.00 with order

Conserve SPACEBANDS AND MATRICES
By regular daily use of the **FW-45 Automatic Spaceband Cleaner** which cleans and polishes 30 line-composing machine spacebands in 45 sec. Get rid of the drudgery of cleaning spacebands by hand, the efficiency of which varies with the person doing the cleaning. Send for illustrated Bulletin in which is described a truly useful machine.
FULLER MACHINE CO., 17 Haigh Ave., Schenectady, N. Y.

BUY AND SPECIFY "AMERICAN"
SYNTHETIC and COMPOSITION ROLLERS
Built for Longer Wear — Better Presswork
AMERICAN ROLLER CO. 1342 N. Halsted St., Chicago, Ill.
225 N. New Jersey St., Indianapolis, Ind. • 1531 Branch St., St. Louis, Mo.

100% AUTOMATIC SLUG SAWING
Odd-measure slugs sawed to any measure as ejected from linecasting machine. Fast — accurate — economical. Write for folder and prices.
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MOHR SAW

$325 GET THE FACTS!
ON THE
NEW *Rouse* BAND SAW
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Send for this
COLOR BOOK
With this book, any group of colors can be located at a glance. All colors are shown in three Ben Day values, as well as solid. There is provision also for easy matching of colors. Send for your copy.
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INVESTIGATE
Cushman Flat and Curved Plate Routers *and*
Cushman Offset motors for Line-casting machines
CUSHMAN ELECTRIC COMPANY, 69 So. Main St., Concord, N. H.

Stop Offset Trouble!
Send today for our new bulletin, "10 Ways to Avoid Offset." 14 pages of valuable hints for the pressman — how to improve presswork save money — by stopping Offset trouble.
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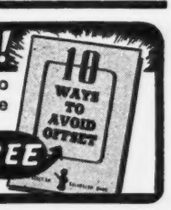

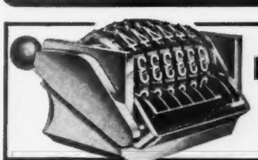
NATIONAL
ROTARY NUMBERING HEADS
for dependable, accurate numbering (right angle & parallel) at highest cylinder speeds
ALTAIR MACHINERY CORPORATION 55 VANDAM STREET NEW YORK CITY

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

RICHARDS Saws SINCE 1910
"MULTIFORM"
"ELECTROMATIC"
"DOMORE" "CLIPPER"
SAWS — ROUTERS — DIES
J. A. RICHARDS CO., Kalamazoo, Mich.

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free TECHNICAL INFORMATION and LITERATURE *for you*

Offered by Display Advertisers in PRINTING EQUIPMENT Engineer

For information circle the number on the convenient postage-paid return card corresponding to the paragraph in which you are interested. Give your name and title, company name and address, then mail. Manufacturer or supplier will send mechanical and production executives latest information. Keep informed—there is no obligation.

Composing Room

1 ELECTRIC PAGE STORAGE CABINET — Made by Hamilton Manufacturing Company. For complete information, circle this number. See Page 46.

2 SAW TRIMMER — A new circular on the C&G No. 3A Saw Trimmer sent upon request. See Page 45.

3 IMPOSING SURFACES—Send for complete information on the Challenge semi-steel imposing surfaces, including prices. See advertisement on Page 49.

4 SAW—Return reply card for bulletin describing Hammend Glider Trimosaw and Hammond Radial Router. See advertisement on Page 45.

5 CUT CEMENT—Send 75c for a trial tube of Booth Zinc Cut Cement. See advertisement Page 43.

6 COMPOSING MACHINE—Intertype offers maximum service on existing equipment, also a booklet entitled "An Ounce of Prevention is Worth a Pound of Cure." See back cover.

7 TELETYPESETTER—Circle this number for informative booklet on composition with Teletypesetter. See advertisement on Page 41.

8 COMPOSING MACHINE—Circle this number for booklets on the Linotype Life Extension Series. See Page 23.

9 COMPOSING MACHINE—Ludlow will send you specimen sheets on Ludlow Tempo. Circle this number. See Page 3.

10 REPLACEMENT PARTS—Send for your copy of Linotype Parts Co. catalog on replacement parts for linotypes. See advertisement Page 43.

11 COMPOSING MACHINE—Circle this number for the complete story of the Monotype "3 Way System." See advertisement Page 1.

12 TYPE METAL—Imperial Type Metal Company tells how to institute a telephone campaign to secure the release of dormant metal. For complete information see Page 33.

13 MATRIX CONTRAST—To reduce errors in ad composition, circle number of post card. See Matrix ad, Page 10.

Platemaking

14 STEREO SUPPLIES—Return post card for latest copy of Eastern Newspaper's catalog on stereotype equipment and supplies. See Page 44.

15 ROUTING CUTTERS—For your copy of the John Royle Catalog 425 on routing cutters, circle this number. See advertisement on Page 46.

16 DRY MATS—If you want a Burgess Chrome Mat salesman to call, circle this number on return card. See Page 39.

17 DRY MATS—To see their outstanding points, get a sample of Wood dry mats for newspapers. See Page 47.

18 PACKING FELT—American Publishers Supply offers samples of Superior Glutex Packing Felt as advertised on Page 39.

19 ZINC—Get the informative booklet "Getting Down to Zinc Facts" from Atlantic Zinc Works. See advertisement Page 35.

20 DRY MATS—Certified Dry Mat Company offers an interesting booklet on plate duplication with dry mats. See Page 49.

21 ZINC—Return post card for complete data on Edes metal for war time. See Page 40.

Pressroom

22 PRESSES—Consult R. Hoe & Company on current press problems. Use return card. See advertisement Page 21.

23 OFFSET PRESSES—Harris-Seybold-Potter offers help in maintaining your offset equipment. Take your problems to them. Advertisement inside front cover.

24 NUMBERING MACHINES—Wetter Numbering Machine Company offers you a unique booklet, "Numbering for Profit." See advertisement Page 33

25 SCRAP PLAN—War time scrap allowance plan. Full information on this new Miller plan sent upon request. See advertisement Page 27.

26 PROOF PRESSES—Complete information available on proof presses upon request. See Page 36.

27 NEWSPAPER MACHINERY—For information on auto plates and auto shavers, circle this number. See Page 8.

28 PRESSES—Complete information available on Duplex presses upon request. See Page 31.

29 ROLLERS AND BLANKETS—For informaiton on Vulcan press blankets and inking rollers, circle number on card. See advertisement Page 9.

30 PRESSES—Goss Printing Press Company will be glad to answer questions on Goss equipment. See advertisement Page 25.

31 PRESSES—Miehle Printing Press Company will be glad to answer questions on Miehle equipment if you make your questions specific. See advertisement Pages 6 and 7.

Paper and Ink

32 PAPER—Champion Paper & Fibre Company offers information on printing papers. See advertisement Page 4.

33 PAPER—Complete information on Gilbert Bond and Gilbert Ledger papers available to all printers. Circle this number and see advertisement page 34.

34 INK—Ask for literature on Sinclair & Valentine Champion Black. See advertisement Page 48.

35 INK—For information on Eagle Printing Ink compiled by their color research laboratory, circle this number. Select booklets wanted Page 49.

36 INK—Ask for literature on Huber Inks. Advertisement on Page 37.

37 INK—Read I. P. I. advertisement and make request for literature on return card. See Page 29.

38 INK—"Ten Ways to Avoid Offset." This is a new booklet which should be of interest to every printer. Circle this number 51, on card for your copy.

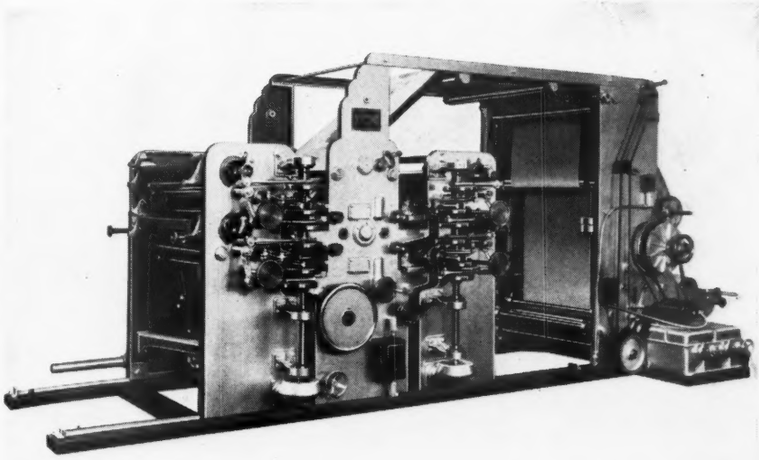
Miscellaneous

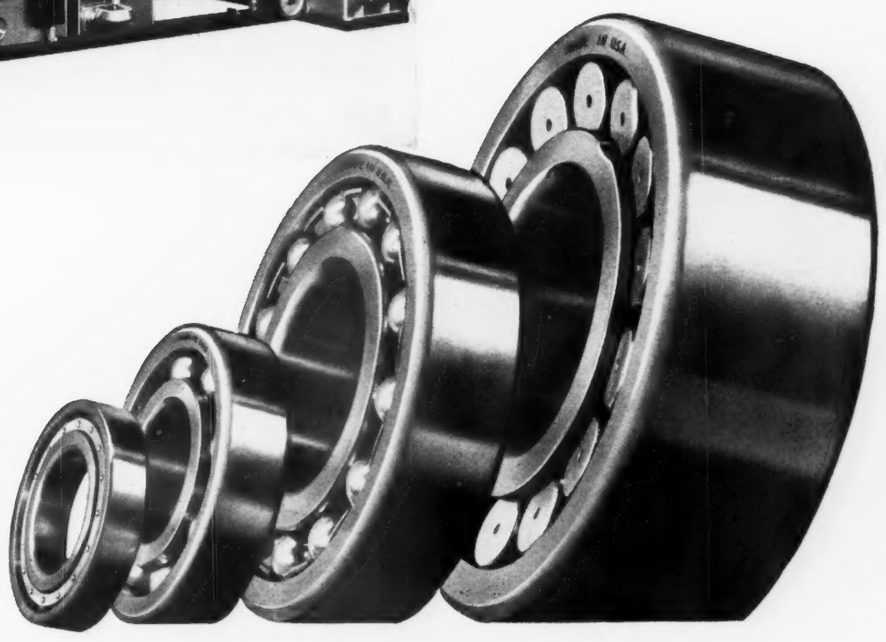
39 BEARINGS—Data on SKF bearings available. Note information on bottom line of card. See Inside Back Cover.

40 COPY FITTING—The Haberule Company offers new and different copy fitting system. See advertisement Page 47.

WEB PRINTERS *do their bit*

on SKF





WE USE SKF BEARINGS

SCHMUTZ MFG. CO., INC.

Next time you visit a press room and you see this Paper Web Printer doing its bit, ask the foreman, "Had any trouble with bearings?" Chances are he'll tell you: "Bearing trouble hasn't been around since we began using SKF equipped machines." And there's every possibility he'll tell you this Schmutz Printer never stops for bearing adjustments, constant lubrication, and bearing wear. Waste resulting from vibration backlash and cylinder jump is curtailed, and web breakage is reduced. All because the SKF's that are a part of it are built to close tolerances . . . to operate entirely without play . . . to assure low starting torque, quick pick-up, and close adjustments. Those are the things that count on a press.

4932

SKF INDUSTRIES, INC., FRONT ST. & ERIE AVE., PHILA., PA.

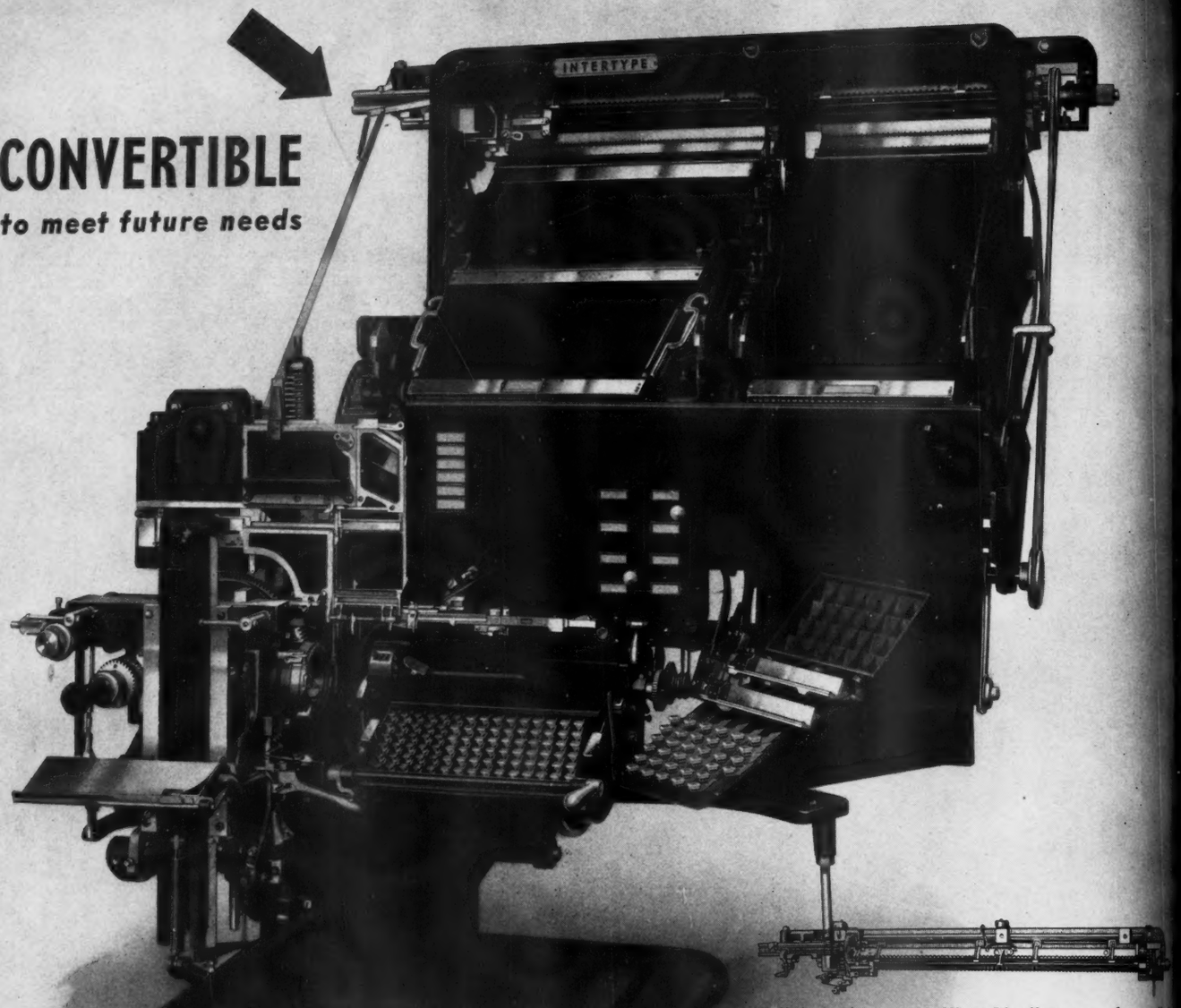
SKF

ball and roller

BEARINGS

CONVERTIBLE

to meet future needs



A Universal Intertype Mixer Distributor can be appli to a Universal Twin C non-mixer machine. Similarly a non-mixer distributor can be applied to a Universa mixer machine. Either conversion can be made in an composing room, in a few hours, at moderate cos Mixer and non-mixer convertibility, an exclusive Inter type feature, protects the user's investment against loss due to changes in his composition requirements.

TO HELP YOU get maximum output from your line composing machines, perhaps the nearest Intertype representative can be of service. He has had wide experience in the solution of composing room problems. Other sources of Intertype service are available through our main and branch offices, where help is available for solving many problems of typesetting machine users. Booklets on machine maintenance, too, are obtainable on request, including data on the care of matrices, lubrication, cleaning, adjustments, how to avoid mechanical troubles, etc. Like so many other products, new typesetting machines are likely to be increasingly hard to get in the months to come. You will need maximum service from existing equipment, and Intertype is prepared to help you in every possible way. Intertype, Brooklyn, N.Y.

FUTURA AND VOGUE FAMILIES

INTERTYPE